

Audubon

NOVEMBER-DECEMBER 1955

Magazine

FIFTY CENTS

PUBLISHED BY THE NATIONAL AUDUBON SOCIETY



1905

THROUGH THE FIRST FIFTY YEARS

1955

Our Golden Anniversary



FRAN WILLIAM HALL is head of the Department of Photography at Carleton College. From boyhood on, he has found the study of birds, insects and all wild creatures a source of tremendous interest. Today through his color films and lectures, under the auspices of the National Audubon Society, he is able to pass this interest along as he shares his conservation studies with Audubon Screen Tour audiences.

"... true color without distortion."

WRITES FRAN WILLIAM HALL: "A wildlife photographer quickly develops an appreciation of camera equipment that is of the highest quality, and he also knows that a top-grade binocular such as Bausch & Lomb is essential if a nature hobbyist is to get sharp definition of image and true color without distortion. After all, a blurred Scarlet Tanager with blue edges isn't a very inspiring sight. A superlative binocular will greatly increase the pleasure of your hours afield."

Fran Hall



Bausch & Lomb
Zephyr-Light
7X35mm Binocular
Balcoated Optics
\$170.50
Federal Tax
Included

WRITE FOR FREE CATALOG. 32 pages of useful information you should know before you buy any binocular. Tells how to select a glass for your own use. Bausch & Lomb Optical Co., 12047 Lomb Park, Rochester 2, N. Y.

BAUSCH & LOMB



Audubon magazine

Volume 57, Number 6, Formerly BIRD-LORE

PUBLISHED BY THE NATIONAL AUDUBON SOCIETY

A bimonthly devoted to the conservation of wildlife, plants, soil, and water

CONTENTS FOR NOVEMBER-DECEMBER 1955

Letters	242
Bird's-Eye View	248
by Roger Tory Peterson	
Bitter Sanctuary	250
by Alfred G. Etter	
Feathered Africans	252
by Walter J. Wilwerding	
Robert Cushman Murphy Retires	254
by John K. Terres	
Prairie Dog Town	256
by George Karger	
In the Beginning— An Early History of our Origin and Growth	259
Birds and Termites	260
by Hervey Brackbill	
Golden Anniversary Messages	262
The Florida Sandhill Crane—A Picture Story	264
by Hugo H. Schroder	
Five Memorable Nature Experiences	266
by Haydn S. Pearson	
How to Attract Birds	268
by Frank F. Gander	
Book Notes	274
by Monica de la Salle	
Children's Books	278
by Dorothy E. Shuttlesworth	
Your Children	280
by Shirley Miller	
Index for 1955, Volume 57	287
Cover: Photograph of white-crowned (Gambel's) sparrow by Frank F. Gander.	

Kenneth D. Morrison, Editor-in-Chief • • • John K. Terres, Editor
Andrew Bihun, Jr., Advertising Manager • Frederick L. Hahn, Art Director

CONTRIBUTING EDITORS: Arthur A. Allen, Henry Beston, George Deck, Jr., Ludlow Griscom, Louis J. Halle, Jr., John Kieran, Robert Cushman Murphy, Haydn S. Pearson, Donald Culross Peattie, Roger Tory Peterson, Herbert Ravenel Sass, George Miksch Sutton, Edwin Way Teale.

AUDUBON MAGAZINE is published bimonthly by the National Audubon Society. Subscription \$3.00 per year in U.S., its possessions and Canada; 2

ys.—\$5.50; 3 yrs.—\$17.50; Foreign, 1 yr.—\$3.25. Checks and money orders should be made payable to AUDUBON MAGAZINE. Editorial and advertising office, 1130 Fifth Avenue, New York 28, N. Y. Reentered as second-class matter April 29, 1942 at the Post Office at New York, N. Y., under the Act of March 3, 1879. Copyright, 1955 by the National Audubon Society. Postmaster: If undeliverable, please notify Audubon Magazine, on form 3578 at 1130 Fifth Avenue, N. Y. 28, N. Y.

INDEXED IN THE READER'S GUIDE TO PERIODICAL LITERATURE

NOVEMBER-DECEMBER, 1955

When writing advertisers, please mention Audubon Magazine



BIRD SONGS, OF DOORYARD, FIELD AND FOREST

VOLUMES 1 AND 2

Long-Playing Microgroove
Records

• Now available. Two volumes covering 275 authentic songs and calls of 96 different North American bird species.

• Beautiful new collection which has taken years to prepare, on two Long-Playing microgroove records enclosed in colorful jackets.

• Interesting commentary on each bird. Each record contains 45 minutes of song grouped for easy location.

VOL. 1

135 songs and calls of 49 species

33 1/3 RPM \$7.95 postpaid

VOL. 2

140 songs and calls of 58 species

33 1/3 RPM \$7.95 postpaid

NATURE WHEEL AND NATURE RECORD

Bird game for young and old

78 RPM \$2.00 postpaid

AUDUBON BIRD CALL

Famous Roger Eddy \$1.50 postpaid

Free descriptive folder available upon request

SOMETHING NEW AND DIFFERENT!

From the gay, quiet era
of not so long ago

"ALEC TEMPLETON AND HIS MUSIC BOXES"

A twelve-inch long-playing microgroove record containing 45 nostalgic old tunes from 24 music boxes chosen from Mr. Templeton's famous collection.

Highest fidelity. Truly a masterpiece of reproduction.

33 1/3 RPM \$5.95 postpaid

Absolute money-back guarantee.

Order today direct from

FICKER RECORDING SERVICE
421 Arcadia Rd., Old Greenwich, Conn.

NATIONAL AUDUBON SOCIETY

1130 FIFTH AVENUE • NEW YORK 28, N. Y.

Your Membership

supports this work



Audubon Junior Clubs, in which more than nine million children in schools and youth groups have been enrolled since 1910.

Audubon Camps, for training adults in nature and conservation, at Medomak, Maine; Greenwich, Conn.; Norden, Calif.; Saronia, Wisconsin.

Audubon Screen Tours, lectures and color motion pictures of which 1,800, given by 30 lecturers, reach an audience of 500,000 people a year in some 200 cities.

Audubon Wildlife Tours, around Lake Okeechobee and into the Everglades National Park, under direction of trained naturalists.

Audubon Art Tours, loan exhibits of original art by famous bird painters.

Audubon Photography Tours, loan exhibitions of natural history salon prints by leading wildlife photographers.

Branches and Affiliates of the National Audubon Society advance our work in more than 300 communities.

Photo and Film Department, from which rights to reproduce photographs and slides can be purchased, slides may be bought, and educational films rented.

Service Department, through which advice as to nature books, prints, bird, flower, and mammal cards, binoculars etc., may be obtained, and such items purchased.

Research Projects, especially for species threatened with extinction.

Public Information Department, services members, and furnishes the press, TV, and radio with information about nature and conservation.

Publications: *Audubon Magazine*, sent to all members; *Audubon Field Notes* (\$3.00 a year), publishes results of bird watching, including seasonal reports and bird censuses; *Nature Program Guide*, *Audubon Junior News* and *Audubon Nature Bulletins* are for teachers and youth leaders.

Sanctuaries: The National Audubon Society's wardens patrol more than 1,000,000 acres of land and water including Audubon Nature Center, Greenwich, Connecticut; Rainey Wildlife Sanctuary, Abbeville, Louisiana; Roosevelt Memorial Sanctuary, Oyster Bay, Long Island; Audubon Center of Southern California, Los Angeles, California; Todd Wildlife Sanctuary, Hog Island, Maine; Corkscrew Swamp Sanctuary in Florida; and other extensive areas in Florida and Texas.

Your Membership will advance public understanding of the value and need of conservation of soil, water, plants, and wildlife, and the relation of their intelligent treatment and wise use to human progress.

Regular	\$ 5	Supporting	\$ 50
Sustaining	10	Contributing ..	100
Active	25	Life	200

Membership includes *Audubon Magazine*.

Your Will: May we suggest that you help to insure the continuance of the ever-widening influence of our program and philosophy by remembering the National Audubon Society in your will. Suggested bequest form: I hereby give, devise and bequeath to the National Audubon Society, in the City of New York, in the State of New York, the sum of dollars (or otherwise describe the gift), to be used for the general purposes of said Society.

Directors: Aubrey Drury, Ludlow Griscom, Robert J. Hamerslag, Mrs. B. Brewster Jennings, Erard A. Matthiessen, Mrs. David H. McAlpin, Mrs. Gerrih Milliken, Jr., Roger T. Peterson, Curt Reisinger, Paul B. Sears, Grant G. Simmons, Gardner D. Stout, Gustav A. Swanson, R. Gordon Wasson.

Officers: Ludlow Griscom, *Chairman of*

the Board; Gardner D. Stout, *Chairman, Executive Committee;* Robert C. Murphy, and Guy Emerson, *Honorary Presidents;* John H. Baker, *President;* Carl W. Buchheister, *Senior Vice-President;* Douglas C. Orbison, *Vice-President;* Kenneth D. Morrison, *Vice-President;* Erard A. Matthiessen, *Secretary;* R. Gordon Wasson, *Treasurer;* Irving Benjamin, *Asst. Treasurer;* Shirley Miller, *Asst. Secretary.*

Regional Offices: Tropical Florida, 13 McAllister Arcade, Miami 32, C. M. Brookfield, representative; Elizabeth Cressman, office manager; Pacific Coast, 2426 Bancroft Way, Berkeley 4, California, William N. Goodall, Pacific Coast representative; Mary Jeffers, office manager.

Letters

Ruby-Throat Feeding Territories

I would not deny that Cass Payne's experience (*Audubon Magazine*, July-August 1955, pp. 158-159) of having mostly female ruby-throats coming to his feeders was typical because more than one friend of mine in this area reports somewhat the same situation. It is not, however, universal. This is the third season during which we have maintained one hummingbird feeder near the house. During the first year the male was irregular. Last year, however, he was possessive, dominant, and a gourmand. It was his regular habit, between sips, to perch nearby and from the perch to dive-bomb the females and successfully drive them away when they attempted to feed. He treated a male that came to the feeders in the same fashion. This bird soon gave up and disappeared.

This year, of 1955, since his arrival on May 1 (exactly the same date he was first seen in 1954) the male is somewhat less selfish, but no less the master of the feeder and its most regular visitant.

This year he allows the female, and now another, perhaps an immature, to approach direct. By the latter part of last season, the female was regularly accustomed to sneaking around the corner of the porch next to the feeder in order to gain a sip or two before the male drove her away.

RODMAN WARD
Kennett Square, Pennsylvania

I have noted a majority of females at my feeders in some places where I have attracted hummingbirds, and have had both sexes at others. It largely depends, I believe, on whether feeders are (1) within the breeding territory of a female, (2) within the feeding range of a male, or (3) on neutral ground, that is, where both males and females meet outside their individual territories. This concentration of hummingbirds of either, or both, sexes, within a small area where there is a large food supply, is not usually a congenial one, as Mr. Ward and others have discovered.

I have asked Dr. A. L. Pickens of Charlotte, North Carolina, to tell our readers of his conclusions about the feeding territories of hummingbirds. Dr. Pickens has studied hummingbirds for many years, and has published some of the results of his research in issues of *The Condor* and *The Auk*. We refer our readers particularly to his interest-

ing paper, "Seasonal Territory Studies of Ruby-throats," *The Auk*, January 1944 issue.—John K. Terres

Letter from Dr. Pickens

"Let a huge farm or other area be represented by a flat mass of cookie dough. A circular cookie-cutter leaves lots of intermediate dough. Several females taking over a rough circle for each nesting area will leave lots of intermediate territory. Either or both females may push their feeding operations into such a previously unclaimed region if a later blooming flower bursts forth therein. The probably more nomadic males, if the newly blooming flower is far from well-supplied neighboring nesting areas, will probably be the first to discover the new source of food, and it may be left to them almost altogether, and they will probably work out some peck or dive-bomb order of territorial claims. A Buddleia hedge near A3 in the map in *The Auk*, 1944, p. 89, drew birds from Territory B and both males

and females fed at this hedge during some years, but there was abundant bloom.

"A huge mimosa or a spreading horse-chestnut draws, during the blooming season, hosts of feeders, obviously from several neighboring areas. Fancy flame azalea on a hill in spring, coral honeysuckle somewhat lower later in the season, and jewelweed in a ravine and cardinal flower in a swamp in autumn;

Steel and Aluminum Buildings
EASY TO ERECT
Garages Look Like Wood
SECTIONAL BUILDINGS
FOR ALL PURPOSES
Shipped Anywhere
WRITE FOR FOLDER
JOHN COOPER CO. 298 2nd St., Hackensack, N. J.

NEW!
"Pocket-Giant"
12 POWER
TELESCOPE!
For Long Range Views
Binoculars Can't Reach!
Achromatic! Big Brilliant
closeups! Here's a power-
ful pocket size, 4 section
companion for sportsmen,
hunters, naturalists,
hikers! Guaranteed pre-
cision nickel plated in-
strument, weighs 7½ oz.
"Money Back" Guarantee.
Order yours today...
send remittance. Est 1897
\$12.50 Postpaid
BURKE & JAMES, INC. 321 So. Wabash, Chicago 4.



"It is not only fine feathers that make fine birds"

These beautiful, fluttering little birds are hand-carved and painted from Pine Cones! We had them imported from Denmark on the word of a friend. The 1½" by 3" birds are wired for easy attachment as tie-ons for your gift packages, on Christmas trees, pussywillows, flowers, Gift Boxes.

Six Birds \$1.95 ppd.



Johnny Appleseed's
BOX 602
BEVERLY, MASS.

FROM OUR COLLECTION OF SEMI-PRECIOUS STONE CARVINGS

Rose quartz Elephant
\$95.00

Rose quartz Squirrel
\$40.00

White Snowflake Jasper
Rabbit
\$110.00

Rhodanite Pig
\$115.00

*Figurines illustrated are
slightly larger than half
actual size*



... Tax included ...

... For the perfectionist ...

You are cordially invited to see our complete collection of birds and other animals carved from semi-precious stones. They are the perfect gift for the discriminating collector.

WEDDERIEN Inc.

Rare Jewels • Distinctive Creations

485 Madison Ave., New York 22, N. Y. • PLaza 3-2950

Solve Your Gift Problems With

KADDY KOOLER

FOR PICNICS, TRAVELING, CAMPING, AND BIRD-WATCHING TRIPS.

This lightweight fibreglass insulated container is designed for use when the larger and heavier picnic cooler is impractical. Retains heat or cold.



Everybody Needs a Kaddy Cooler

Weights only 2½ lbs., yet spacious enough to hold 14 seven ounce bottles or 12 cans of your favorite beverage. Price \$5.95 ppd. Enclose your gift card and we will mail your gifts for you.

THE ADAMS COMPANY
Heafford Junction, Wis.

as one dies and another appears what terrific readjustments in hummingbird territories must become necessary! P. A. Taverner in "Birds of Western Canada," 1926, notes the disappearance of males in various species as summer advances. Something of the kind seems to occur in Anna's hummingbird, also, though it is not so migratory as certain other species. It would be interesting to know if the males vacate to leave more food for females and young. Some might retire to the mountains, others back to the tropics.

"Mr. and Mrs. E. O. Clarkson, a few blocks away, have a wonderful bird-feeding station and she tells me that in general she has both male and female ruby-throats but one summer recently her yard appeared to go male, and that near her mountain summer home she has observed an area that seems to be visited by males."

The Mystery of the "White-Throated," Ruby-Throat

Dear Allan Cruickshank:

In our July-August 1955 issue of *Audubon Magazine*, page 159, we used your photograph No. 1 of a ruby-throated hummingbird about which there has been some question as to whether it was a male or a female. We labeled it a female because of what appears to be a

white throat-patch, even though the cowl of dark feathers almost certainly suggests that it is a male.

I have gone over several hundred skins of male and female ruby-throated hummingbirds in the collections of the American Museum of Natural History, but I can not find a male with the plumage that your photograph suggests. If it is not a male in an intermediate plumage between molts, is it possible that the dark and iridescent throat feathers gave off a light that registered white in the photographic print?

If you can recall this particular bird, or refer to your original records regarding this unusual photograph, I shall appreciate hearing from you as soon as convenient.

JOHN K. TERRES, Editor

Dear John:

The minute I saw that photograph of the ruby-throated hummingbird published in *Audubon Magazine* I knew it would arouse some discussion concerning the sex of the bird. That was one of the first pictures I ever took. It was in the days before color film and the National Audubon Society wanted a good colored slide of a male ruby-throated hummingbird showing its glowing throat. The office sent my negative to a professional slide artist who had difficulty getting the correct ruby-color over the black throat. He took it upon himself to "touch-up" the negative to make the throat light. Consequently all subsequent prints from that negative have shown a light throat instead of a dark one.

I hope this will clear up the mystery of the male ruby-throated hummingbird with the seemingly albinistic throat!

To prevent further headaches for yourself and other editors, I have asked the office to discard that troublesome negative.

ALLAN D. CRUICKSHANK

Audubon Camp of Maine
Medomak, Maine

Appropriate Hobby

Margaret V. Sprunt, wife of Alexander Sprunt, Jr., ornithologist and veteran leader of the National Audubon Society tours in the Lake Okechobee-Kissimmee Prairie region of south-central Florida, is talented in her own right.

In April, 1951, while at her home in Charleston, South Carolina, Mrs. Sprunt started carving birds from balsa, the very light tropical wood found on the west coast of South America, which was so graphically described in the book, "Kon-tiki." Mrs. Sprunt received her instructions in the art of bird carving from a friend. The majority of her

Turn to Page 246

No Finer Audubon Reproductions

Audubon birds
faithfully
reproduced
from the
elephant folio
on fine English
dinnerware



White-crowned sparrow
Bewick's wren

Carolina turtle dove
Scissor-tailed flycatcher

* Passenger pigeon
Cedar waxwing
* Band-tailed pigeon
Kingbird

* Illustrated

9" square plates	\$24.00 a dozen	\$16.00 for eight
Round 10¼" service plates	\$27.00 a dozen	\$18.00 for eight
9" dessert plates	\$24.00 a dozen	\$16.00 for eight
Cups and saucers	\$24.00 a dozen	\$16.00 for eight
Cream soup cups and stands	\$36.00 a dozen	\$24.00 for eight

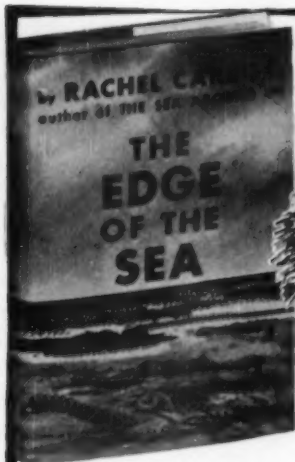
(Postage and Handling 50c)

Order from: SERVICE DEPARTMENT, NATIONAL AUDUBON SOCIETY
1130 Fifth Avenue, New York 28, New York

or from your nearest dealer

MADDOCK & MILLER, Inc. • 129 Fifth Avenue, New York, N. Y.

When writing advertisers, please mention Audubon Magazine



**RACHEL
CARSON**



Earth-bound creatures as we are, it is endlessly fascinating for us to hear of the many other arenas where life abounds. Rachel Carson moves from the salt depths of *The Sea Around Us* to a vast realm daily visible to shore-dwellers—the edge of the sea. This is a book to live with, to pick up at any time or place for the pure lyricism of the writing. And beyond this *The Edge of the Sea* is a practical and scientifically accurate guide to the shore. The superb drawings by Robert Hines enable the reader to visualize the myriad forms of life that inhabit the world of our coasts. \$3.95

The **EDGE** of the **SEA**



When two such distinguished and enthusiastic naturalists as Roger Tory Peterson and his British opposite number, James Fisher, join forces for a 30,000 mile tour of North America, repercussions are wide spread and Field Guide fans eagerly take notice. Fisher was seeing our continent for the first time, comparing the reality with the image reputation had made of it. His words, translated from notes made on the trip, are so spontaneous and full of excitement that readers will see their own continent anew, as Roger Peterson did, through his eyes. Never before had an Englishman, or indeed have very few Americans, seen as much of North America's remaining wilderness. The exhilaration and enthusiasm of their trip is infectious. The range of their knowledge is prodigious. Fisher and Peterson change caps from geologist to ornithologist to botanist to historian faster than Poo-bah ever could. The whole is wrapped in a package of good writing, with enthusiasm for flavor and experienced knowledge for body. Handsome line drawings by Roger Tory Peterson. \$5.00



**ROGER TORY
PETERSON and
JAMES FISHER**

WILD AMERICA

Mail this coupon to:

**National Audubon Society
1130 Fifth Ave., New York 28, N.Y.**

Please send me _____ copies of **THE EDGE OF THE SEA** at \$3.95 each, and/or _____ copies of **WILD AMERICA** at \$5.00 each.

☐ Check enclosed

☐ Money order

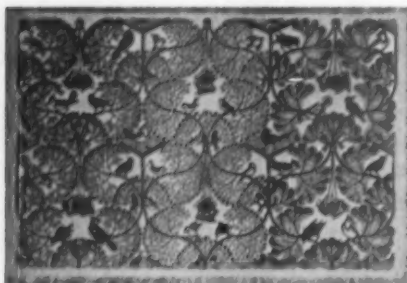
NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

A CHRISTMAS CUSTOM!

According to our mail a bird-lover's Christmas isn't complete any more without our wonderful FOLLY COVE block prints of New England winter birds . . .



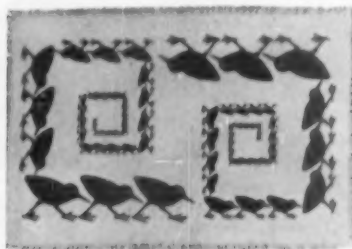
WINTER BOARDERS—forest green on white

And here's more news! An enchanting new design with winter birds and their animal friends. You'll have fun finding them all.



FLORA AND FAUNA—forest green on white

And since we've had so many requests, and were unable to include it in our catalogue, here again, strolling the shore, are our busy little



SANDPIPERS—dark green on eggshell

Place mats are 12" x 18", plain matching napkins are 14" square, of finest percale, hand fringed and launder perfectly. Black and white prints on heavy cardboard available now in all designs, shipped in tube, ready for framing.

Lunch Sets—4 mats—\$3.75

4 napkins—\$1.50

Yard Goods—36 in., per yd.—\$4.50

54 in., per yd.—6.75

Black and White Prints—\$3.00

Tablecloth prices on request. Specify size. Please include 35c postage for orders under \$10.00. 50c per package for gift wrapping. Glad to send you our catalogue. Just ask us.

JEAN POOLE
Box 2, Rowayton, Conn.

models are made up as singles or pairs, but she also has done a number of panel pieces on driftwood having 8 or 10 birds mounted on them. The reproductions, made to proportions, are checked by her husband for structural accuracy. Up to the present, Mrs. Sprunt has hand-carved a total of 450 birds of 70 species, all beautifully colored. Species represented that are best-liked are the cardinal, painted bunting, wood duck, blue-winged teal, Carolina wren, chickadee, and blue jay. She has done more than 100 cardinals and her creations are now in 27 different states.

Mrs. Sprunt has achieved all this despite the fact that she is a busy wife, a mother, and a dietitian during the summer at the Audubon Camp of Maine. Her leisure time is greatly limited, since the Sprunts travel widely over the country while her husband presents Audubon Screen Tours, leads Audubon Wildlife Tours, and collects data for books and articles on ornithology.

Garden clubs are beginning to recognize the value of using these ornamental bird models in the conservation units of their annual flower shows, but the major demand is from bird-watchers



Photograph of Mrs. Sprunt by Jack H. Merritt.

who want their bird models to be both artistic and authentic.

JACK H. MERRITT

Clewiston, Florida

Do Birds Recognize Their Hosts?

I suppose anyone with a feeding station is as eager to talk about his birds as a doting parent about his children, and I am no exception.

I have eight chickadees and a nut-hatch that eat from my hand, which I know is not unusual. What seems to me a little more surprising, however, is that six of the chickadees have several times waylaid me at unexpected places, apparently proving that it is not just the outthrust hand they recognize. They swoop into the nearest tree, calling imperiously and darting at me.

The first time this happened I was coming out of the gymnasium, where I teach, to get into my car. Fortunately, I never go without a supply of sunflower seeds and chopped black walnuts in my pocket because sometimes the birds meet me on my return from work



The Clewiston Inn

"Finest Small Hotel South"

Clewiston, Florida

Air Conditioned
Slumber Comfort Rooms

Cocktail Lounge  Dining Room

Relax in the Cocktail Lounge and study the famous original mural of Everglades Wildlife. Many Audubon Members annually make The Inn their headquarters while observing and studying the wildlife in the area. See the Smooth-Billed Ani—the rare and exciting Cattle Egret and many other specie. Clewiston, Florida Is An Established Bird Sanctuary.

For Reservations, Contact Your Travel Agent or A. F. Cotterell, Mgr. Phone 2-3501



or intercept me when I go out in the morning.

The second time was on the one snowy day I happened to walk to college. The six chickadees saw me as I was crossing the campus. Since my thoughts were on my approaching class and not on birds, they had to do quite a bit of scolding and fluttering to get my attention that time. This has happened also when I was walking in an opposite direction, and once they found me on a friend's porch two blocks away.

JANET SEELEY

Geneva, New York

The
1956
Bird
Engage-
ment
Calendar



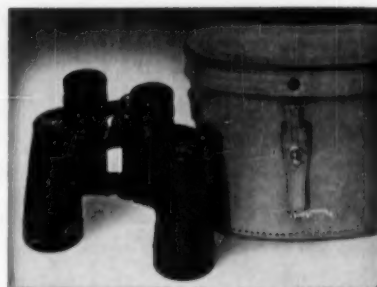
Fifty-five selected reproductions from the Audubon Elephant Folio owned by Trinity College of Hartford, Conn., with a colored cover. Ideal for yourself or as a Christmas gift. Weekly engagement sheets useful for appointments, meetings, bird arrivals, planting dates, etc. Sheets can be removed after use leaving a volume of bird reproductions. Boxed ready for remailing. Send \$1.25 for each calendar. Special discount to Clubs for fund raising.

GRANT HILL PUBLISHING CO.
Box 196A Bloomfield, Conn.

A STODDARD'S QUALITY GLASS

7 x 35' CENTER FOCUS

\$29⁹⁵
Only plus 10% tax



These Stoddard's imported binoculars come with a lifetime guarantee against defects in workmanship or materials. The 7 x 35 is universally recognized as the best all-around birding glass. These are really exceptional at this unheard-of low price. They are fast, easy center-focusing with right-eye adjustment for perfect definition. Hard-coated lenses and prism surfaces. Wide field and excellent brilliance. Complete with fine pigskin case and carrying straps.

This glass has been so popular with members of the Massachusetts Audubon Society that we are now offering it nationally. Please mention the Audubon Magazine when you order.

Mail and phone orders filled postpaid

Open
Monday
Evenings

STODDARD'S

374 WASHINGTON STREET, BOSTON, MASS.

HAcock 6-4187

Serving New England for over 100 years

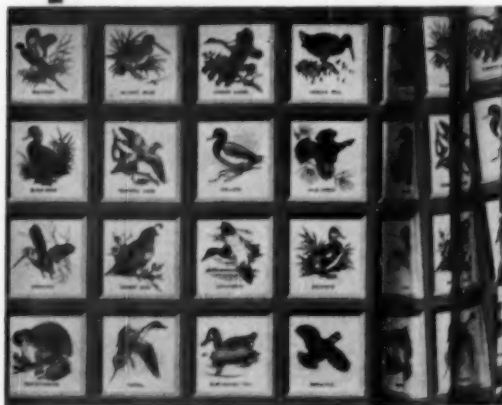
Opposite
Bromfield
Street

Decorative Fabric Designs

by Don Eckelberry

Two new 36" hand printed cottons with designs by the noted illustrator of the Audubon Bird Guides. Available through decorators, retail store, decorating departments and the Service Department of the National Audubon Society.

"Bird Gallery" (half-width shown)



"Upland Game" (full width shown)



CHENEY, Greeff

Main Office: 150 Midland Ave., Port Chester, N. Y. CHENEY & CO., INC.

Telephone: WEstmore 9-0200

Showrooms in New York • Boston • Philadelphia
Chicago • San Francisco • Los Angeles



**SHANTY BOAT
CRUISES**
A novel holiday afloat—
Inland—through the tropical Ever-
glades country—a Naturalist's
Paradise

One Week Cruises—December 19 thru
May 14

For illustrated booklet and rates write to

CAPT. JIM NISBET

Box 1628-A, Ft. Myers, Florida

Winter BIRD-WATCHERS in Florida!

When you see Okeechobee Birds of Lake
and Prairie make THE SOUTHLAND
HOTEL your comfortable home base.

For 12 years we have been official headquar-
ters of the Audubon Wildlife Tours out of
Okeechobee. We are accustomed to bird-watchers
and offer the best food and quarters in this area.
Single or double rooms, twin beds, private bath
and shower; free parking at our door. Come and
see us and we will do our best to please you,
just as we have pleased hundreds of others on
the Audubon Tours. Make your reservations with

MRS. M. C. PITTS, Owner-Manager
Okeechobee, Florida



Visit famous Montauk Point
for the Fall, Winter, and
Spring Bird Migration—

Thousands of
Oceanic, Shore,
and Winter Birds.

Accommodations at Stanick's Cottage
Apartments featuring two bedrooms, fire-
place, cooking facilities, etc. Apartments
heated and furnished. Special rates for
Birders and Nature Lovers.

For reservations write or phone:

MR. E. STANICK

Old Montauk Highway and Hull Road
Montauk, N. Y. • Montauk Point 8-2880

NATURE LOVER'S PARADISE



Most attractive Colonial type house and among lofty
spruces, pines and maples on knoll with view of mountain
across lake. Nature lovers and bird watchers should be
particularly pleased by the terrain and fauna of this
property. The house has seven rooms: large living room
with fireplace, study, dining room, powder room, and
kitchen on first and three bedrooms and bath on second
floor. Circulating hot water oil heat; insulated; two car
attached garage; three acres; Taxes, \$213. Priced for
quick sale—\$27,900.

Helene Pigott, realtor, Northford, Conn.

Roger Peterson's BIRD'S

Reflections on Flowers

IN September, I completed an-
other botanical field tour and
added a hundred drawings to the
collection which will appear in the
forthcoming "Field Guide to Wild
Flowers" on which Margaret Mc-
Kenny and I have labored so long.
By next spring we hope to put the



completed book into the hands of
the publisher. I am afraid I have
been the bottleneck of this book,
for the contract was signed at least
10 years ago. At that time I was
merely to act as editor. However,
we ran into a snag on the art work.
The prospective artist begged off;
her publisher would not release her
from another project. So, in an un-
guarded moment, I said: "Well, then
I will do the drawings."

Such a simple thing to say, but
such a staggering commitment! Since
then I have drawn well over a thou-
sand flowers—perhaps closer to 1,200
—covering thousands of miles by
car in the eastern and midland states
trying to catch the brief period of
bloom of various species. My sta-
tion wagon has crawled at its slowest
speed along back country roads while
I kept one eye on the road and the
other on the flowers, so if I have
become slightly wall-eyed, that is the

reason. My battered vasculum has
been crammed with my finds which
I usually drew in the evening in
some tourist cabin or motel. In the
case of rare orchids, gentians or other
species where prudence forbade my
picking them, I often drew them
while lying flat on the ground. But
most of the flowers were drawn in
motel. In my suitcase I carried a
200-watt daylight bulb which I often
substituted for the weak 40- or 60-
watt bulb in my quarters. When
this new Field Guide appears, I
shall be able to look at each draw-
ing and bring back by association
the place where I found the flower,
the circumstances in which I drew
it, and incidents, some pleasant,
others trying. All of this has been
very educational, and I want to re-
cord here, before they fade, some of
my impressions about flowers in
general.

Birds have wings; they can mix
and standardize their populations.
They usually look precisely the way
they are supposed to look (unless
they are in molt). On the other
hand, flowers are rooted to the earth.
They are often separated by broad
barriers of unsuitable environment
from other "stations" of their own
species. Therefore, over the cen-
turies, they have tended to develop
subtle differences. Some of these
changes are so marked that botanists
have given them varietal names.
Others are ignored, because they
would overburden an already com-
plex taxonomy. Or a flower, from
the same seed, may be "depauperate"
in a sterile soil and oversize in a rich
soil or where lack of competition
has favored it in some way. So then,
I found, as I zigzagged from Minne-
sota to Maine and from Ontario to
Virginia, that a flower I knew well
could, at times, look strangely un-
familiar. Sometimes it did not seem

Illustrations
by the author.



EYE VIEW

to key down properly even in Fernald's edition of Gray or Gleason's new edition of Britton and Brown. I became worried at first about my ineptitude but later was reassured when I discovered that even the trained botanists to whom I showed such plants seemed frankly puzzled. Flowers, it seems, are variable; at any rate many of them are, particularly the flowers of late summer and fall. Furthermore many of them hybridize, so we should not expect to score 100 per cent on our identification.

Some people, with orderly minds, are able to use keys in running down their flowers, but most of us throw up our hands in despair because of the bewildering terminology (Gleason defines 625 technical terms in his glossary). There are nearly 30 ways to say that a plant does not have a smooth leaf or a smooth stem, that it has fuzz or hair of some sort:



pubescent, puberulent, puberulous, downy, glandular, hairy, hispid, hispidulous, hirsute, hirsutulous, lanate, pilose, pilosulous, papillose, penicillate, scabrous, sericeous, setiferous,

Your Book Published!

Our famous royalty plan launched 627 authors. We publish, advertise, distribute. Send manuscript for free report or write for Brochure A.
Pageant Press, 130 W. 42nd St., N. Y. 36

SHEPPARD'S MOTEL

Phone 2-2891 Modern
New OKEECHOBEE, FLORIDA
Bird-Watchers Welcome

setose, setulose, strigose, strigulose, tomentose, tomentulose, villose, villos, villosulous, and woolly! Of course, most of these mean slightly different things, but in using a key

Continued on Page 259



Flower Madonna
Original Hummel

with indented signature "M. I. Hummel." Beautiful and inspiring work of art. In ceramic, height 9".

in white \$8.00 in pastel colors \$14.00

Inquiry about larger size or any other Original Hummel Figurines invited.

Graceful Angels

in white 6 asstd. \$7.50 3 asstd. \$3.75
in pastel 6 asstd. \$12.00 3 asstd. \$6.00

—all prices post paid, order from—

Hildegard Studios

597 Farmington Ave., Hartford 5, Conn.

TESTA MICROSCOPES



A DISTINGUISHED LINE OF AMERICAN - MADE LOW - COST, SCHOOL MICROSCOPES.

LABORATORY SIZE, WITH LARGE, PROFESSIONAL INCLINING STANDS, PRECISE INTERCHANGEABLE OPTICS.

INSTRUCTION MANUAL FURNISHED. QUANTITY DISCOUNTS TO SCHOOLS.

MODEL F—100 to 700X.....\$92.50

Parfocal triple nosepiece. Condenser stage with iris diaphragm. Coarse and fine adjustment.

MODEL G-3—100 to 400X.....\$59.00

Triple divisible objective. Substage diaphragm turret. Most economical high school microscope.

MODEL S-2—75 to 250X.....\$33.50

Double divisible objective. Simple and efficient for elementary science use.

MODEL A—15, 45 and 75X.....\$47.50

Sturdy, standard-sized, with wide field, sharp vision. Excellent for nature study.

Substage Lamps and Other Accessories

Write for literature to Dept. A

TESTA MANUFACTURING CO.
10122 E. Rush St., El Monte, Calif.

FINEST BINOCULARS AND TELESCOPES!



BAUSCH & LOMB ★ BUSHNELL
KERN SWISS ★ BECK GERMAN

All types and prices
LIBERAL TRADE-INS
Postpaid • Free Trial

Order from a Museum Curator,
an experienced ornithologist.
For Christmas suggestions, see
our classified ad, last page.

Bartlett Hendricks
BINOCULAR HEADQUARTERS
PITTSFIELD 50-A, MASS.

take your **FIELD TRIP**
with **WALT DISNEY**



using... **WORLD ACCLAIMED**

TRUE LIFE ADVENTURE

NATURE DRAMAS

16mm • COLOR BY TECHNICOLOR

...the most authentic on-the-spot records of nature in action ever filmed. To assemble these photographic facts, months, even years have been patiently spent by top naturalist photographers. These rare documentaries have been produced in a manner truly "Disney"



NATURE'S HALF ACRE
BEAVER VALLEY
SEAL ISLAND

Mail coupon NOW to...

WALT DISNEY PRODUCTIONS
16mm DIV. DEPT. A11 BURBANK, CALIF.

GENTLEMEN: Please send us your complete catalog of DISNEY TITLES and address of our nearest film library.

DEPT. A11

NAME _____

ORGANIZATION _____

ADDRESS _____

CITY _____ STATE _____

One of the wintering areas of the sandhill crane is in the national wildlife refuge at Roswell, New Mexico. The author describes an unforgettable flight of cranes into

By Alfred G. Etter*

Bitter Sanctuary

WHERE the dry plains of New Mexico west of the Pecos drop down to meet the river, there are some brilliant spots of water that jewel an otherwise desolate landscape. These shallow, blue, bitter-water lakes are fed from obscure springs that rise among the slumped cavernous clay and gypsum rocks that are the foundation of this New Mexican country. The vague sulphurous fragrance of the water drifts over salt-encrusted flats of sacaton and pickleweed, where shorebirds, waterfowl, and wading birds draw their sanskrit in the sand. These lakes are called the Bitter Lakes, and they are sanctuaried behind a fence and sign—The Bitter Lakes National Wildlife Refuge.

This refuge is one of the few remaining winter resorts where sandhill cranes come in reassuring numbers. As though his destiny depended on it, man has destroyed the isolation which this bird demands, and has destroyed its marshes, and persecuted it wherever it sought to garner its pittance of grain. Happily, in the Pecos Valley things are different.

The Bitter Lakes enjoy the solitude of semi-desert, yet within easy range are broad irrigated fields that provide a source of feed for cranes by day and ducks by night. Unfortunately, extensive grain fields have recently given way to cotton, as strains adapted to the region have been perfected, so that the birds must fly farther away for their daily ration. In late winter some now abandon the refuge for other parts of the valley.

It is a reassuring experience to

find, somewhere in this broad land, a sanctuary for the wild gray spirit that is the sandhill crane. Here a few lakes have become many. Dikes and excavations have spread the water over many additional acres. Slowly these new pools will become a part of the landscape, if the Pecos condescends, for they are on its floodplain. So long as irrigation dams continue to divert their waters it has little use for a broad valley. Today the famous Pecos is an orphan stream lost in red mud, caught in red banks, a red mirror that turns the brilliant blue New Mexican sky into rippling purple.

East beyond the river are a hundred feet of cliffs, the caving and crumbling home of sink holes and funneled lakes and canyoned red clay and melting gypsum, rock wren and horned owl and rattlesnake, skunkbush, black grama, side-oats, and bare white earth.

On a fall day the Bitter Lakes combine crisp water and crisp sky, filmy salt cedars, and a pale suggestion of western mountains, with the hazy blue tent of Capitan Peak a patient intermediary between the real and the limitless. Ducks are everywhere—raucous ducks, idle ducks, hawk-frightened ducks, drifting rafts, and hidden singles in the saltgrass. Frightened patterns of bee-lining fowl shoot past overhead. Marsh hawk and duck hawk are harrying the small lives that pass here. Jacksnipes dive from the grass and flocks of sage sparrows and horned larks search the brittle saltbush and the dusty soil. A snake-necked great blue heron lowers hydraulic legs to land on a levee. Rippling sedge imitates a bittern and nervous sandpipers patrol a muddy point.

I am excited to find, far out in

the shallow marsh, the humped gray backs of a hundred sandhill cranes, shin deep, out of reach in the bubbling expanse of blue water and broad New Mexican infinity. Their backs reflect the immemorial sun, which has been their constant companion since an unknown past. In this valley, on this refuge, they have found time standing still, the past they cling to, a part of the present. There is but a handful here now, humped together, flapping wings, one wing and then the other. But wait!

The low sun, using shadows, draws canyons and crevices on the red cliffs, and using streaks of cadmium, paints long spits of saltgrass across the lakes. Straggling groups of gulls drift in from the south. I walk over strange acres of salt-encrusted land, sedges swept in cusps and waves and frozen in gypsum. White dust flies away from my shoes. Then black dust boils up as I pass over patches of burned peat that claim my feet at each step. This gives way to crisp saltgrass, then soft wet grass, then standing water. The water comes into my shoes, but that concerns me little. I want to be concealed in the marsh at twilight. I want to stand shin-deep in the water among the dead sunflowers and salt cedars, waiting to become a part of that wild primitive moment when the cranes return. The sun sinks shin-deep too, on the horizon, and disappears in red and orange smoke. It leaves behind a cool yellow haze, across which silent gulls drift up the valley with deliberate winging. They make no comment, only veer away a little when I reveal my presence.

Then slowly out of the great space that inhabits this land come other living things, high enough in the

* Alfred G. Etter, one of the National Audubon Society's Screen Tour Lecturers, tells us that he studied to be a geologist, but the interruption of World War II, his service in the Air Forces as a photographer, and travel in Africa, got him started making motion pictures which he has been doing off and on ever since. Six months of recuperating in a Missouri woods, after war service, gave him the setting for his Audubon Screen Tour lecture film, "A Missouri Story." This is Mr. Etter's first article for *Audubon Magazine*.—The Editor

deep blue heaven still to intercept the tangent sun. They are not points of light but slowly changing filaments that gather in the sky, tenuous skeins of life an immense distance down the river, cajoling crosswinds, covering, all the time, miles of space and miles of river. Then comes that mere suggestion of a cry that sets my ears ringing! I turn my head across the wind, straining to hear the strange calling that upsets me, makes me search the sky restlessly.

Interminable skeins of big birds are coming back to their wading pools to sleep, after a day spent gleaning milo maize fields. The few cranes in the marsh begin moving about, then give returning calls to the companies of birds that are coming near now, near enough to see each bird with thin neck stretching out straight ahead, feet beyond, buoyant body riding the wake of the bird in front, 100 birds united with each other in undulant, or-

dered flight. A short string comes overhead calling; wings are closed and the large birds descend, passing over my head with softly swishing feathers. I can feel the breeze on my upturned face from these wild wings that moments before were brushing the sunset sky a mile above the darkening earth. Trees and bluffs are black now, streaks of grass mere ripples of black in silver water. Other flocks come in high above. I can hear their little bird call, like the warble of a woodcock; it is a familiar call among them, but it sounds strange coming from this gaunt prehistoric bird. Then there is a constant, coarse, frog-like calling as flock after flock hovers and drops down to spend the night in the shallow, warm water. They are heavy with grain taken surreptitiously from fields for 50 miles around.

The last straggling company of cranes passes overhead, bound for the upper lakes. I can barely distinguish them in the twilight. Evening

is closing in on the soft plumes of cedar, on the mumbling cranes, and I raise myself from my uncomfortable concealment. Thousands of cries go up, and with them gaunt cranes, circling in prolonged panic. As I seek the shallow water, slashing along through the marsh I am cheered and derided by the impatient calling of at least half the 10,000 cranes that call this valley home. Half lost and fearing to fall any minute into a soft mushy hole and disappear, I check the silhouetted cliffs, a distant cottonwood, the observation tower of the refuge. As I walk, many twittering birds flush from their night's shelter in the salt-encrusted sedge. Leaving the water I walk over warm snow-like acres with only the remnant light of the submerged sun, the presage of a watery moon to guide me to the road.

The cranes are silent now, shindeep again, and shoulder to shoulder

Continued on Page 284

Photograph of sandhill cranes in flight by Allan D. Cruickshank.





Lilac-breasted roller,
Coracias caudatus caudatus.

Yellow-bellied sunbird,
Cynnyris venustus falkensteini.



East Africa, to many people, means the excitement of seeing big game. A noted American artist got a bigger thrill from his experiences there with

By Walter J. Wilwerding

SO MUCH has been written about the multitudes of animals in East Africa and so many motion pictures have shown them to our public that most people think of Africa in terms of lions, giraffes, zebras, and other large mammals of veldt and jungle. Few seem to realize that Africa is exceedingly rich in bird species; that in areas, where all the large animals have been exterminated, the birdlife is still abundant. For the nature student, there is in Africa a lifetime of interest and study in the birdlife alone.

I confess that my main interest when first going to East Africa in 1929, was in the large animals of the veldt, the hoofed, the horned, and the carnivorous beasts. But soon I was so fascinated with the many new and interesting birds that I almost forgot that I had gone to East Africa to draw and paint the larger animals. I found myself giving more and more time to the drawing and painting of birds. Frankly, though I drew and painted them, I hadn't the slightest idea of what sort of birds they were. One day, the Dis-

trict Commissioner came to visit my camp near Lake Basotu in Tanganyika. Showing him my bird paintings, I asked him what their names were. "Oh," was his answer, "there are so many of those little birds, I don't know what they are." I asked my native boys and all I got from them was that they were "endege." *Endege* means "bird" in Swahili. That they were *birds* I already knew.

Near the Ruvu River in Tanganyika, I had a Masai guide who tried to do better with bird identification. He said that the kingfisher was a bird that lived on fish, the vulture was one that lived on dead animals, etc. He was a good mimic and would even tell me that this or that bird was one that made this or that sound, which he would imitate. All of which was enlightening, but still of no help in identification.

A bird, that enthralled me with its rare beauty and which still does,

had me baffled at first. It goes in flocks as a rule, also singly; it has a burbling song somewhat like that of our bluebird, and it runs on the ground like our American robin. Head, neck, back, wings, and tail are a shimmering metallic blue-green and the breast is red like our robin. In the sun, this bird looks as if dressed in shimmering satin. Appealing to some friends at the American Museum of Natural History on my return, I found that it is the glossy starling, *Spreo superbus*, and that another allied species, but slightly different in coloration, is *Spreo hildebrandti*. I sometimes saw both kinds closely associating with each other. Since that first experience, I have made two more voyages to East Africa, the last one in the summer of 1953, and I have always looked for my superb glossy starlings. They have never failed me. A flash of bright satin among

FEATHERED

Love bird, *Agapornis fisheri*.



Superb glossy starling,
Spreo superbus.



AFRICANS

Illustrations
by the author.

the thornbushes and I know my old friends are still there. In the bird markets they are called "satin starlings." In western Uganda, near Mbarara, I found other starlings that were metallic blue all over without the red breasts.

Another flashy fellow is the blue roller, of which there are a number of varieties. Its light blue wings and tail are changeable in different lights, sometimes looking light cerulean blue and other times a more light violet blue. Its rolling, or sort of tumbling flight, gives it its name. It likes open country, often at the edge of a woods, where it will perch on the limb of a dead tree to make forays after food.

Bee-eaters are among the flashiest of dressers and have green feathers in contrast with orange, white, and black. A pair of them, perched on the coral blossoms of the aloes is really a beautiful sight.

Near the Ruwenzori Mountains, in the Congo, there were grackle-like birds, with long wedge-shaped tails, that went about in flocks, making clicking noises in the manner of our grackles. They are a deep iridescent and metallic blue from head to tail.

One of the prizes in bird beauty, a veritable gem among birds, is a tiny kingfisher, hardly larger than one of our warblers. This little mite, which I have seen near the rivers of Tanganyika and also near the lakes of the Congo and Uganda, has a red breast, a vermillion bill, with the top of head, neck, back, wings, and tail a brilliant light blue. It sports a white collar on the back of the neck and has my vote as being one of the most beautiful birds in the world.

The pied kingfisher is a larger bird than the foregoing and contrastingly dressed in black and



Black-headed oriole, *Oriolus monacha*.

white. It is a common bird along the Nile and the great lakes of Africa.

The Nile and the lakes area is one of the best birding places in the world. Geese, ducks, plovers, herons, cranes, storks, and ibises abound there. The common goose is the Egyptian. The common herons are the Goliath, which reminds one of our blue heron, and the white egret, which is much like our American egret. The marabout is the common stork around the lakes, where they congregate in the fishing villages. It is a common sight near Katwe and Tufmak, in Uganda, to see the native fishermen cleaning their catches, surrounded by marabout storks acting as scavengers. White pelicans are also common in these places, as is the crowned plover and hammerhead. Some call the latter "hammerhead stork," while others call it "hammerhead heron." Neither is correct as the hammerhead is neither heron nor stork. It is rather small, no larger than our green heron, and is whole-colored coffee brown. One sees it standing along lake shores, often in company with plovers. It is a common sight to see its haystack nest in the crotch of a tree, with the tree's branches

covered with the little, round nests of the weaver finches.

The white-headed fishing eagle is another common bird around the lakes and rivers of Africa, where its high, shrill scream may be heard at all times of the day. I have seen them sitting in the shallows of the Nile and once photographed one perched in the top of a tree within a few feet of a monkey. It's a very handsome bird, dressed in white, black, and red-brown in adult plumage.

The touracos are also very attractive birds. Everywhere where fruit grows one finds the touracos or plantain-eaters, as they are commonly called. A large one in Uganda, that calls from jungle and thicket in a guttural, garbled-hooting manner, is light blue with a yellow band on the outer edges of its long tail. Hartlaub's touraco is green and blue, with blood-red flight feathers edged with black. Touracos are fond of the wild fig trees, where they feed on the fruit, as often perching upside down as right-side up, and meowing like cats. They have an aggravating way of hiding behind foliage when they realize they are being watched.

When the grass is green and the trees in bloom, then the little weaver finches build their beautifully-woven nests, round and straw-colored, that hang from the trees like so many Christmas-tree decorations. Some trees are literally covered with them. They like to nest in the umbrella-acacia tree, but also nest in the yellow-barked and the gall, or drepanolobium, acacia. In the Congo, they hang their nests in the bamboo trees and from the ends of palm fronds.

There are many varieties of weaver finches. A common one is the black-fronted yellow weaver, with a black smudge on the front of the head. Another is plain black and both kinds will nest together in the same tree.

One of the handsomest is the little orange or fire-weaver finch. At mating time, the feathers of the male grow long and soft on the back of the head and neck and it is these feathers, along with others on breast and rump, that carry the bright colors, which vary from yellow, through orange, to a brilliant scarlet. The rest of the head and body feathers are black in contrast with the bright-colors.

In Africa the sunbirds or nectar-eaters take the place of our hummingbirds. Like hummingbirds they hover about flowers, but do not stop suspended in the air with rapidly-moving wings. They dart quickly from blossom to blossom, momentarily pausing to cling to the flowers. The bills curve in a sickle-shape. Females usually are dull brown in color, the males often black with metallic-shimmering heads, backs or upper breasts, in various bright colors.

There are many small parrots in Africa not much larger than sparrows, but stout and round in appearance. These are commonly called "love birds." Their tails are not long and pointed, but short. They have red bills and the plumage is yellow, green, and blue, with the green predominating. One kind has a brownish smudge on the front of the head. These are trapped much for cagebirds and almost every hotel and home has a cage of these small parrots. Because of their general green coloration, they are hard to find in the woods.

One thing that interested me and to which I do not know the answer is a bird that I found in the open grasslands of western Uganda and the eastern Congo. On the open veldt, near roads, I frequently saw this bird, which flew and looked much like our meadowlark. It was about the same size and would fly into the grass from perches on small shrubs or the tall elephant grass. Its back had the same buff, brown, and black markings; its breast was yellow, it showed flashy white feathers in its tail when it flew; it had the same manner of setting its wings to soar before alighting. It did not have the black horseshoe marking on the breast as our meadowlark and its bill, while long, was more like that of the common starling. I think it might have been some form of starling.

This bird made me a bit homesick for America. I suppose one cannot help but look for similarities to our birds when one visits a strange land. No doubt, that is how the meadowlark, that is not a lark, and the robin, that is a thrush, happened to receive their names, since they reminded our first American settlers of the birds back home, in Europe.

—The End

ROBERT

In 1955, the year in which we celebrate the 50th anniversary of our organization, Dr. Robert Cushman Murphy, Honorary President of the National Audubon Society, retired from his official position with the American Museum of Natural History. For 35 years he had served the museum as a distinguished professional ornithologist. At his retirement he was Lamont Curator of Birds and Chairman of the Department of Birds. During his long career with the museum, Dr. Murphy has been associated also with the National Audubon Society, as a director, officer, or both, for 34 years.

On October 25, 1921, the Board of Directors of the National Association of Audubon Societies for the Protection of Wild Birds and Animals, Inc., as the National Audubon Society was called at that time, elected Dr. Murphy a director. Other prominent ornithologists, who were on the Board and present at the meeting were Drs. Frank M. Chapman, Jonathan Dwight, George Bird Grinnell, and T. S. Palmer.

Seven and one-half years later, on April 30, 1929, the Board of Directors elected Dr. Murphy treasurer of the National Association of Audubon Societies.

After 16 years of service as a director and eight years as treasurer, Dr. Murphy was elected President of the National Association of Audubon Societies on October 26, 1937, to replace Kermit Roosevelt. That was the year in which Dr. Murphy was awarded the Brewster Memorial Medal, in recognition of his two-volume work, "Oceanic Birds of South America." The Brewster Medal, periodically awarded by the American Ornithologists Union, is presented to the person who has made an outstanding contribution to the ornithological literature on the birds of the Western Hemisphere.

It was in 1937 that Dr. Murphy began contributing a series of fine editorials and articles to *Bird-Lore*, now called *Audubon Magazine*. Beginning with the November-December 1937 issue, and including the September-October 1940 issue, he wrote "The President's Page." During this time, he gave a lecture, "Posterity's World," before a meeting at Boston of the Trustees of Public Reservations of Massachusetts. It was a superb account of the conservation problems and needs of our country at that time, which are just as urgent today

CUSHMAN MURPHY RETIRES

as they were 17 years ago. The address was published in the May-June 1938 issue of *Bird-Lore*.

Dr. Murphy's editorial about the Christmas Bird Census (now called the Christmas Count) should be as interesting today to those who participate in the Christmas Count as when that editorial appeared in the January-February 1939 issue of *Bird-Lore*.

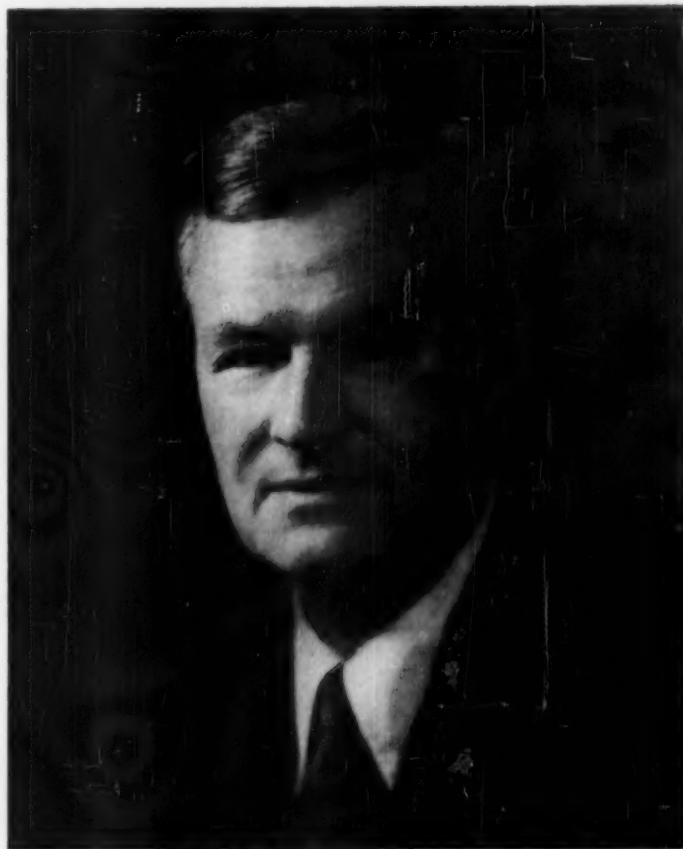
Another article by Dr. Murphy, "The 'Chair' for Insects?" (*Bird-Lore*, May-June 1940; pp. 243-252) is a fascinating discussion of the biological, or natural, control of insects, versus the indiscriminate killing of kinds that are especially needed to maintain an ecologically sound community of animals.

In the March-April 1940 issue of *Bird-Lore*, John O'Reilly, in a biographical sketch about Dr. Murphy, called "Deep Sea Birder," wrote: "He is recognized as an outstanding oceanic biologist and geographer, and his name in American Men of Science is marked with the coveted star. . . ."

At a meeting of the Board of Directors of the National Audubon Society on October 14, 1940, the Board accepted, reluctantly, Dr. Murphy's retirement as President and adopted the following resolution: "Resolved that the Directors accept, with the greatest reluctance, Dr. Murphy, your decision not to stand this year for re-election as President of this Society. You have filled that position with distinction and outstanding ability. Yours has been a guiding hand in development of the prestige and influence of the Society. Since 1921 you have devoted time, thought, and energy without stint to the Society's affairs and have served it well as Director, Treasurer, and President. It is the unanimous desire of the Directors to confer on you, in recognition of your invaluable contributions to the Society's welfare and your services to the wildlife of the world, the title of Honorary President of the National Audubon Society."

Dr. Murphy thus became the second Honorary President of the Society, an office previously held only by Dr. Frank M. Chapman.

In the January-February 1949 issue of *Audubon Magazine* (formerly *Bird-Lore*) Dr. Murphy wrote an article, "The First Fifty Years," which summarized the history of *Bird-Lore* and of *Audubon Magazine*. The article also touched on some of the outstanding events and the personalities which have become



Photograph of Robert Cushman Murphy by Fabian Bachrach, courtesy American Museum of Natural History.

"historical landmarks" in the development of wildlife conservation and its philosophy. Perhaps we can give no finer message to our readers, in this anniversary year of the founding of the National Audubon Society, than to quote the last few paragraphs of Dr. Murphy's article:

"In short, a philosophy of conservation was born and grew up in the half-century under consideration, and this magazine had no small part in its nurture. Man, or at least educated man, looks at his fellow-inhabitants of our planet less naively than in 1899, is less inclined to glory in his own apartness, and readier to recognize how intimately his well-being is tied up with that of the rest of life. He is not as anthropocentric as formerly. He no longer seeks moral precepts in the behavior of animals, for he knows that all of them—himself included—are "predators," and that only the plants can manufacture

food. He has become, we hope, less of a passer of judgments and more of a humble searcher after truth. He has begun to feel concern lest his children, and their children's children, may inherit an earth poorer in the capital and interest of both subsistence and spiritual values. Rather suddenly, he has acquired an enormous respect for the age-long, untutored wisdom of nature, which seems to have cast his own efforts, or the lack of them, in a very bad light.

"Such are the kinds of information and the point of view that have become part of the necessary intellectual equipment of a thoughtful man; they belong to the new humanities, which we must honor if we are to save the world and ourselves. And so, the idea of 1899 has grown, like heaven, until it has become an organ of civilization.

"Vivat, floreat, crescat!"

—John K. Terres



One of the 600 inhabitants of Prairie Dog Town, Lubbock, Texas.

Prairie Dog Town

Prairie "dogs," once numbering millions on the Great Plains, are now as rare in their natural habitats as the American bison. A town in Texas has one of the only colonies that lives naturally within a state park.

All photographs by the author.

By George Karger

MACKENZIE STATE PARK, its 549-acre, state-owned and city-managed recreational area, led all Texas state parks in attendance in the year ending August 31, 1953. Over a million visitors throng the park yearly to picnic, swim, play golf and tennis, and—what is more important to naturalists and animal conservationists—to watch, feed, study, and enjoy the antics of the approximately 600 prairie dogs* occupying a seven and one-half acre area within the park.

Created in 1938 as an attraction for residents of Lubbock and tourists alike the Lubbock Prairie Dog Town is, perhaps, the only known project of its kind in the United States. Although a number of zoos and parks have prairie dogs, the Lubbock Prairie Dog Town is the only place of its kind in which they are permitted to live within a park in their native habitat. Lubbock is in the high, level northwestern section of Texas, in typical prairie dog country, therefore the "town" could hardly occupy a more appropriate site.

Up until about two or three decades ago, millions of these little mammals inhabited the plains country, ranging north to southern Canada and west to the Rocky Mountains. Gregarious by nature they established themselves in "towns" living close together much as fish travel in schools or as bees live in colonies. Covering several acres and

consisting of anywhere from 40 to 1,000 "residents" each of the prairie dog towns were as much a part of the high plains area as the dry, dusty climate itself.

Eagles, hawks, owls, badgers, snakes, coyotes, weasels, and other carnivores are the prairie dog's greatest natural enemies but settlement, and the destruction of these predatory animals around the turn of the century led to their decline and the prairie dog's increase. The irrigated, cultivated land also provided the prairie dogs with plenty of food and water. With their populations unchecked, they devoured cotton plants, stripped entire acres of row crops, and rendered vast stretches of grassy rangeland useless to man.

The prairie dog's tendencies to compete with crops finally grew so widespread that they became a matter of serious concern. Local, state, and even national government agencies tried control programs to help farmers and cattlemen. The prairie dog eventually became such a rarity that it led to the founding of the Lubbock Prairie Dog Town both as a part attraction and also a means of conserving and perpetuating this rapidly vanishing species.

A fence 30 inches high and sunk underground to a depth of three feet surrounds the entire prairie dog area. The fence is wire throughout with the exception of the surface part of the front, which is built of stone blocks. Although an open prairie dog town might seem more eye-catching and natural to visitors park officials realize that it wouldn't be feasible since the prairie dog cannot be easily confined to his designated area. Since he likes to roam around and see what is going on, the lawn areas of the park would probably prove a great temptation.

There is an abundant supply of grass in the prairie dog town itself. Two-thirds of it are sown in Bermuda while the remainder is planted in rye for winter forage. To provide adequate irrigation the entire Prairie Dog Town is equipped with underground sprinklers.

The rye and Bermuda grass are the only feeds provided by the park. The rest are supplied liberally by visitors who toss bread, cookies, vegetables, and other foods to the prairie dogs in much the same manner as New Yorkers feed the pigeons in Central Park. Sweets are a special favorite. So are the wild onions which have a tendency to grow inside the town. Prairie dogs are also known to be fond of stems and seed-heads of sunflowers but visitors and tourists seldom if ever bring any for them.

Although the prairie dog isn't too discriminating in his choice of foods he will definitely turn up his nose at any kind of nut-meats. Because he bears a close resemblance to the squirrel many visitors toss in pecans under the erroneous impression that he shares the squirrel's fondness for them. The fact that it is unnecessary to purchase supplementary food for the prairie dogs permits the project to be operated at a minimum of expense to the taxpayers.

Park attendants have no means of obtaining the exact measurements of the underground burrows in which the prairie dogs make their homes but they are known to average around 12 feet in depth, slanting almost straight down. The burrows also have numerous side entrances into which the animals can dart to conceal themselves even more effectively. To prevent water from running into the burrows the animals build, at the entrance, a cone-shaped

* The author refers to *Cynomys ludovicianus*, the black-tailed prairie dog. Prairie "dogs," a rodent related to the ground squirrels, are usually classified in two groups—the black-tailed and the white-tailed. The white-tailed prairie dog, *Cynomys leucurus*, is smaller, more slender, and is generally limited in its range to mountainous parts of Wyoming, Utah, Colorado, Arizona, and New Mexico. The black-tailed prairie dog prefers short-grass prairies; the white-tailed, grassy uplands, and mountainous country.—The Editor



Lubbock's unique "town" is not inhabited exclusively by prairie dogs. Uninvited guests include the rabbits dwelling at the south end, and, also, a number of prairie, or burrowing, owls. The latter are known for their tendency to live in abandoned burrows in order to spare themselves the labor of digging their own, a factor which probably led to their moving into Prairie Dog Town. If they were ever discovered there by the prairie dogs, however, their fate

would probably become a matter of grave concern. A number of years ago the Philadelphia Zoological Gardens tried the experiment of keeping prairie dogs and prairie owls in the same area. It proved disastrous as the prairie dogs made short shrift of the owls.

Although no person can obtain a Lubbock prairie dog as a pet, no sincere request on the part of any zoo, park department, or animal conservation organization is ever rejected. During the past two years, requests for prairie dogs have been received from Tyler, Texas; Roanoke, Virginia; Amarillo, Texas; and the Children's Zoo of Oakland, California.

The slogan of the Lubbock Chamber of Commerce reads, "Cities do not happen—they are built." In the same manner nature lovers and conservationists of that thriving Texas city realize that many kinds of wildlife cannot be preserved without the protective interest of man.

The prairie dog, though often inimical to man's economy, is nevertheless friendly, interesting, and so much an inherent part of the life and folklore of the western plains that it is certainly worthy of being protected and perpetuated for future generations.

With its unique Prairie Dog Town, Lubbock is doing a job worthy of commendation, largely through the generosity of animal-loving visitors to Mackenzie State Park.

—The End

mound of bare earth about one-foot high and three or four feet in diameter. With four-inch craters in the center the burrow entrances resemble miniature volcanoes. The prairie dogs form the craters by pressing the ground into shape from the inside with their noses. During the grass-growing season the residents of Prairie Dog Town are also kept busy enlarging their burrows since the roots of Bermuda grass have a tendency to seal off the entrances.

Dwelling in the same general type of climate as its ancestors the Lubbock prairie dogs breed readily. The young are born during March and April, in litters of four to six and occasionally seven. After they are about seven weeks old, the young prairie dogs venture above the ground but dart back into the family burrow very quickly when frightened. The female apparently believes that suckling her young is a private matter. Any of her offspring's attempts to do so above the ground results in a slap that is anything but gentle.

As the youngster grows up he becomes a little bolder but still retains his tendency to scurry back underground when he senses danger. Being a neighborly chap he thinks nothing of taking refuge in another prairie dog's burrow if it happens to be nearer than his own.

The natives of Prairie Dog Town are an endless challenge to visiting camera fans. Getting the animals to assume an appealing pose is only half the battle. Their reddish-brown, natural-earth color, which serves as a highly effective camouflage against enemies, makes it difficult to obtain a good, contrasting background.



A prairie dog takes a tidbit from a young visitor.

Prairie dogs like cookies, bread, and vegetables offered them by visitors.



In the Beginning—

An Early History of Our Origin and Growth

PART V

Editors' Note: In our Golden Anniversary year, we believe that our readers will be interested in reading a republication of a report, "History of the Audubon Movement," by William Dutcher, which appeared in the January-February 1905 issue of Bird-Lore, the predecessor of Audubon Magazine. It tells of the origins and early growth of the Audubon movement, which culminated in the incorporation of the National Association of Audubon Societies in 1905. Later on, the name was changed to National Audubon Society. Since the 1905 issue is unavailable to most of our readers, we are reprinting this report in installments in this and forthcoming issues of Audubon Magazine.

The Audubon Magazine

IN JANUARY, 1887, *The Audubon Magazine* appeared as the organ of the bird protection movement. *Forest and Stream* in an editorial, January 13, 1887, states: "The methods of personal letter writing and circular distribution, heretofore adopted by the Audubon Society, have proven inadequate to keep pace with the growth of the movement, and now the Society is to have its own special medium in the world of journalism. The *Audubon Magazine*, devoted to extending and building up songbird protection, will be published in the interest of the Society by the Forest and Stream Publishing Company.

"The special purpose of the new monthly will be to advance the work already so well under way, give stability and permanence to that work, and broaden the sphere of effort in such directions as may with reason suggest themselves. Ornithology, discussed in a popular way, will, as a matter of course, take precedence over other subjects of natural history, to which the pages of the new magazine will be largely devoted, but it will treat of outdoor life and animated nature in many forms. The price has been made merely nominal, fifty cents per year. The Audubon Society will hereafter grant admission to associate membership. This step is taken out of deference to the expressed desires of a large number of persons who are in hearty sympathy with the Society in its aims and in all of its methods, except the pledging of members. For one reason or another such persons do not care to sign the Audubon pledges. They will, however, be glad to lend to the work their influence and active aid, and it is therefore desirable that they should in some way be recognized."

In May the Audubon Society reported a membership of about 30,000, and *Forest and Stream* in an editorial said: "The expenses of this movement, which have

been very heavy, have been borne by Forest and Stream Publishing Company without any assistance from outside persons. Four numbers of the *Audubon Magazine* have appeared and we are able to form an intelligent judgment of the character of the periodical. It is full of matter which is both instructive and entertaining. Each number contains a full-page illustration of some well-known bird, carefully reproduced from Audubon's plate, together with a description and life history of the species figured. Besides this the story of the life of the great artist-naturalist is appearing as a serial. Economic questions are treated in an intelligent and novel way, and there are lighter articles and stories for the younger folks." June 30, 1887, the Secretary of the Audubon Society reported a membership of 36,000 and, in August, 38,400.

At the fifth meeting of the A. O. U. held at the Museum of the Boston Society of Natural History, October 11-13, 1887, Mr. Sennett, chairman of Committee on Bird Protection, reported as follows: "The Committee was doing all in its power to disseminate information in relation to the subject, the chief obstacle to its work being the ignorance of the public on all matters relating to the utility of birds and the measures necessary for their protection. This ignorance was especially dense among farmers, who were intensely prejudiced against hawks and owls, and indifferent to the services rendered by these and many other useful species which they were accustomed to regard as enemies and pests. The information the committee had gathered respecting the food of birds of prey showed conclusively that, with two or three exceptions, these species were far more beneficial than harmful, many of them subsisting chiefly on field mice and other farm pests. In this connection quite an extended account was given of the very excellent work of the Audubon Society."

Continued in next issue.

BIRD'S-EYE VIEW—Continued from Page 249

you have to know exactly what the author had in mind when he used a certain term. That is why keys sometimes fall down. Your concept of a term and his might not be the same.

If you can master them, keys are the proper formal approach to flower identification. But, I am afraid, most of us belong to the picture-matching school and it is for this audience that our Field Guide has been planned. Our system is based on the visual impressions; color first, then general shape, then the distinctions between similar species—the "field marks." Families will be learned by indirection. Several of my botanist friends tell me frankly they do not approve, but others are all for the idea. The plan is consistent with the fundamental philosophy of the other field guides which are based on the visual approach rather than the handglass or museum technique.

Nearly all the flowers that grow in vacant lots are immigrants. So are a very large percentage of those along the roadside. At least a hundred common roadside flowers—including most of our "weeds"—came from Europe. The list is long: black mustard, bouncing bet, red clover, white clover, Queen Anne's lace, spearmint, peppermint, mullein, butter-and-eggs, teasel, chicory, dandelion, devil's paint brush, field daisy, burdock, bull thistle, and many, many others. Some like the handsome day lily of Asia escaped from gardens, but most of them came unseen, as tiny seeds mixed in with shipments from across the sea. That is why the first known station for a foreign plant is often at a seaport or along a railroad track. A city or a farm is much the same the world over. A house mouse, a rat, or a starling sees little difference between London and New York. Neither do the many weeds that have followed man across the Atlantic. These immigrants almost invariably grow in the disturbed soils, few of them venture far from the roadside; they apparently cannot compete with our native flowers in their chosen environment. One exception that comes to mind, however, is a lovely European orchid, the helleborine (*Epipactis*) which now blooms profusely in wild woodlands of the Berkshires and upstate New York.

Continued on Page 283



BIRDS AND TERMITES

By Hervey Brackbill

TERMITES need no man's sympathy; they're a tremendous "biological success"—and a lot of people who aren't biologists use stronger phrases about them than that. Yet there are times when it must be discouraging to be a termite.

Once I came upon a swarm of winged ones on a city lawn, although other eyes besides mine had already discovered the swarm. What I came upon was a robin devouring little insects of some kind just as fast as it could. Its manner seemed so eager and the insects so inexhaustible that I stopped to find out what they were. They were termites. There were several hundred of them massed on less than a square foot of ground. They were crawling over and up the grass blades. Now that I had frightened off the robin by my approach, a termite was occasionally rising into the air and flying away—something I had not seen happen before.

I withdrew, and at once the robin returned. It ate eagerly for five minutes by my watch, then gathered a billful of the termites and took them across the street to a rose arbor in which it had a nest with four downy young. Then it came back again and resumed its own gorging. Meanwhile, apparently attracted as I had been by the robin's activity, a starling came and fed briefly, then two English sparrows, a second starling, a third English sparrow, and finally, a chipping sparrow. For another five minutes these birds worked on the termites. And though the swarm must for a while have been replenished from underground almost as fast as it was decimated, when the last bird—it was the robin—had departed and I again went forward and examined the area, I could find but a single insect.

Hundreds of termites had been eaten. But that is not all that had happened. Hundreds more—thousands—indeed, hundreds of thousands—had been prevented from being born. For a swarm of termites

such as I had seen is not comparable to, say, a swarm of ants that has collected about a dropped sweetmeat. Termites are hideaway creatures; most of them spend their entire lives underground, or inside the wood upon which they feed. Only one purpose ever brings into the open, at one or two periods of the year, the winged members of the colony—which, by the way, develop only at these times. That purpose is the making of a flight that will result in the establishment of new colonies.

The winged termite swarms contain both males and females, and the flights these make are sometimes called nuptial flights. They are not really that; the termites do not conjugate in the air, as ants, butterflies, dragonflies, and some other insects do. They merely fly about briefly, for distances varying with the species. With *Reticulitermes flavipes*, the one I saw, the distance is sometimes only a few feet—then they come again to the ground. Upon alighting their wings quickly fall



Illustration by Walter Ferguson

No creature is unqualifiedly "bad." Termites, eaten by birds, and warred upon by man, are no exception.

off or are rubbed off. Individuals of opposite sexes that meet each other then begin associating by two's, and these pairs dig into the earth. In those new burrows, some days later, conjugation finally begins and the new colonies are launched.*

Out of the mass of termites I had seen come above ground to make such flights, how many had got into the air? Since at a little distance it took intense watching to discern them rising on the wing, it may well be that I badly underestimated, but I doubted that more than a dozen had. All the other dozens and scores and hundreds had had their hopes blotted out while still a-borning. And if "hopes" is an impermissible word, it is perhaps also an inadequate one. For surely, whatever their precise nature may be, the sensations that fill a termite at this time

must in their power be commensurate with the once-in-a-lifetime experience—the sole experience for which this particular form of termite is born.

On another occasion, too, it was the feeding of birds on them that led me to notice that termites were attempting a flight. This time the insects were merely straggling up at intervals from between the bark and wood of a low stump. There was no safety in small numbers, however. Inconspicuous as this swarm was, a white-throated sparrow repeatedly, over a period of two hours, went to the stump and picked it clean. A flicker also did that, and did more; it thrust its long tongue down under the loose bark in quest of prey that had not yet come into the open.

Perhaps no creature on earth is unqualifiedly "bad." Even the hated termite is not; away from man it is decidedly "good." It is one of the agencies that help to decompose the highly resistant cellulose of dead wood. "The termite problem arises,"

Dr. Charles A. Kofoed, an authority on the insect, has written, "because of man's attempts to change the ordinary processes of nature by preserving for his own use, over considerable periods of time, wood and its products, which it has been the immemorial function of the termites and associated organisms to break down and return to the soil and the atmosphere."

So, too, with the English sparrow. Highly objectionable to some people in many ways, this bird nonetheless does economic good, as by its habitual attacks upon termites. These are habitual; they were recorded from Maryland and New York in the famous study of the sparrow's food published by W. B. Barrows of the U. S. Biological Survey in 1889. Bringing that study up to date in 1940, E. R. Kalmbach of the U. S. Fish and Wildlife Service, both widened the area and emphasized the economic value of the English sparrow's feeding activities. The presence of termites in "considerable numbers" in stomachs from Alabama, he

Continued on Page 282

* Some authorities say there are 10 species of the genus *Reticulitermes*, in America. *R. flavipes* has the widest distribution in the eastern and southwestern United States; *R. tibialis* appears to be spread over the widest area in the central and south-central states; *R. hesperus* occurs largely along the Pacific slope from British Columbia south into lower California.—The Editor

Golden Anniversary

Baldwin, L. I., New York

The Golden Anniversary of the National Audubon Society is an event that delights many of us. But the most eloquent greetings on this occasion will not be written. They will be expressed in the songs of birds that have been protected through the efforts of the Society, by the beauty of egrets and terns no longer slaughtered for their plumage, by the flight of shorebirds and other species saved from extinction.

EDWIN WAY TEALE
(Author and Naturalist)

Sandy Springs, Georgia

During the years that I have spent in the outdoors I have had many occasions in various parts of the United States to come across examples of the splendid work being done by the Audubon Society. Particularly, I have been impressed with the egret rookeries in Florida, which, but for the work of this great organization, would be no more. I am sure that I express the feeling of all sincere conservationists when I say that this Society has been a pioneer in the preservation of wildlife, and I extend to it my hearty congratulations.

ED DODD
(Creator of MARK TRAIL)

Washington, D. C.

As a conservationist, I have a great respect for the work of the Audubon Society.

When I was a small boy in school, the Audubon Society helped to acquaint me with the wonders and mysteries of the world of birds and insects and other wildlife. I have never ceased to be fascinated by this realm apart from our own. I shall continue to try to help advance the purposes of the Audubon Society in my present capacity as a United States Senator.

RICHARD L. NEUBERGER
(U.S. Senator from Oregon)

Bronxville, New York

The Golden Anniversary of the National Audubon Society marks not only 50 years of progress but, actually, 50 years of achievement! Magnificent bird sanctuaries and wildlife refuges have been established. Parents and children have learned the value of our natural resources and the need for conserving them. The feather industry is dead and the country is alive with a growing knowledge of and an increasing interest in its beautiful and wonderful native birds. Congratulations to the National Audubon Society, and may the good work go on!

JOHN KIERAN
(Author of Nature Books)

Detroit, Michigan

Allow me to congratulate the National Audubon Society on its Fiftieth Anniversary this year!

It has been my pleasure and privilege to observe the work of the Audubon Society and also the local groups for the second half of this time, and have been pleased to notice not only increasing interest on the part of the public but also increasing influence for good on the part of the Audubon groups.

It has been especially gratifying to witness the increasing scope of Audubon work, which now interests itself not only in birds directly but the entire ecology which contributes to bird survival.

In this fiftieth year of the Audubon Society, perhaps it is sufficient to say that the nation would be poorer without both the national and the local Audubon groups.

JACK VAN COEVERING
(Wildlife Editor, The Detroit Free Press)

New York, New York

From its founding in 1905, the Audubon Society has been a leading force in the protection of American fauna. Its first great success was to prevent extermination of the egret, much sought for its beautiful breeding plumage during the early years of this century. The Society so aroused public opinion against the cruel and unnecessary slaughter of this bird that fashions changed, protective laws were passed, sanctuaries established, and the egret has once again become relatively common.

But the Audubon Society is very much more than a bird-protective organization. It is dedicated to the broader aspects of conservation, synthesized in the new science of ecology that teaches the vital interrelationship between living beings and their natural environment. A major purpose of the Audubon Society is encouragement of public understanding of this relationship and therefore of the need to protect the wildlife, plant, soil and water resources of our country and our continent.

The most dramatic concrete activity of the Audubon Society is in its sanctuary work. Its fifteen wardens currently patrol more than a million acres of land and water to give protection to concentrations of birds—such as egrets, spoonbills, ibis and many other varieties—that would otherwise be disturbed and persecuted to the point of extinction. The four Audubon camps, in Maine, Connecticut, Wisconsin and California, provide five two-week sessions each summer for amateur or professional conservationists who want to refresh their knowledge of natural history at first hand.

The Audubon Junior Clubs are formed in schools and youth organizations. For many of

Messages

the 9,500,000 children who have, at nominal cost, been members, these clubs have provided a stimulating introduction to the wonders of nature and the need for conserving it. In many other ways, including the well-known Screen Tours and such excellent publications as *Audubon Magazine*, the Society reaches out to the public in furtherance of its mission.

JOHN B. OAKES
(Editorial Staff, *The New York Times*)

Charleston, South Carolina

Not so long ago a minor miracle happened here in the South Carolina Low Country. The miracle was this—laws were passed extending protection to the alligator. This was in truth a miracle because for centuries in this region every man's hand has been against the alligator. He killed hunting dogs and woods-ranging hogs, he was supposed to destroy untold numbers of fish, he did serious damage to rice-field banks. Practically everybody believed that the sooner the whole 'gator tribe was exterminated the better.

Yet today it is unlawful to kill an alligator in this region. The public has made it so. People have learned that the 'gator has its place in the economy of nature; they have realized that it should not be exterminated.

Now, so far as I know, the National Audubon Society has never carried out a crusade for protection of the alligator. But the change in public feeling which has made that protection possible is, nevertheless, largely the result of what may be called the Audubon influence. That influence has helped powerfully to change our people's attitude toward the whole animal world. And one curious effect of that change is that it is now possible to extend the protection of law even to so friendless a creature as the alligator.

No doubt others will tell of the millions of beautiful and useful birds which the Society has saved. It seems to me that this less familiar minor miracle of the 'gator is worth a thought.

HERBERT RAVENEL SASS
(*Nature Writer*)

Washington, D. C.

It is a real pleasure to extend my warm congratulations to the National Audubon Society on occasion of its Golden Anniversary.

From personal knowledge I know well the achievements of the Audubon Society in Florida as to conservation of our great natural heritage. These accomplishments have been greatly enhanced on the national level.

Americans have no greater heritage than that granted by a bountiful Provider. The National Audubon Society is rendering an invaluable

service to our people in advancing public understanding of the value and need of conservation of wildlife, plants, soil, water, and the relation of their intelligent treatment and wise use to human progress and happiness.

SPESSARD L. HOLLAND
(*U. S. Senator from Florida*)

Philadelphia, Pennsylvania

The National Audubon Society has enriched America. It has fought valiantly to preserve our country's winged beauty. Multitudes of all ages have accepted the Society's standing invitation to enjoy the fascinations of nature. Through the Society's communications, knowledge and understanding and appreciation for the nation's natural resources have been spread. Life in America is more abundant in many senses and living is more gracious because of Audubon achievements. May each of the fifty years ahead see the Society's beneficent influence continue to grow in strength and expand in reach!

WHEELER McMILLEN
(*Editor-in-Chief, Farm Journal*)

Topeka, Kansas

A Golden Anniversary of the Audubon Society is a golden day for all American people; indeed, for all people who believe in the wisdom of Nature's design, who know that soil, water, plants, wild animals and human beings depend upon each other, who believe that every generation should be able to experience spiritual and physical refreshment in places where primitive nature is undisturbed. I am quoting this, as you know, from your own beautiful statement of the Audubon philosophy which might well be that of all wise and thoughtful people.

KARL A. MENNINGER, M.D.
(*The Menninger Foundation
for Psychiatric Treatment*)

Hillsdale, New York

The National Audubon Society was a major influence in deciding me to devote my own life to nature, back when the Society and I were still both children. But it is not just because we have grown up together that I feel a special wish to express comradeship and salute to the Society in the year of its Golden Anniversary. More than any other single agency, the Society has served to spread and foster a wise and warm philosophy of the outdoors. It has done an incalculable service in keeping modern man alert to the old, old wonder of the world; it has stood strong and sensible for the cause of Nature, which is really the first and last cause of us all. Great work!—and congratulations on this Fiftieth Anniversary of its beginning.

ALAN DEVOE
(*Author and Naturalist*)

A PICTURE STORY



The tame sandhill crane that became a "watchdog" in a citrus grove. Photograph number 5 in the text.



The pair of cranes that walked about in front of the author's photography blind. Photograph number 1 in the text.

The two eggs, photographed in the nest from 65 feet away. Photograph number 2 in the text.



FLORIDA SANDHILL CRANE

By Hugo H. Schroder

NUMEROUS Florida cranes nest on the Kissimmee Prairie in central Florida; they usually build in ponds, constructing a nest of marsh vegetation, which is built above the level of the water. The female lays two large eggs. The photograph (No. 1) of the pair of cranes walking about in front of their nest was made from a blind that I built of branches and set up in a marshy pond. To build the blind I used palmetto fronds, placed between bay tree branches. I left the blind overnight. When I returned the next morning I took several photographs but the cranes would not return to their lone egg after a long wait; they just paced back and forth in front of the nest.

Some years later I acquired a 4 x 5 Graflex with a 32-inch Zeiss Magnar lens. I used this from a blind I built about 65 feet from a crane nest, which contained two eggs. (See photograph No. 2.) I had built the blind quite a distance from the nest, but the female circled it eyeing it sus-

piciously from all angles. Finally, convinced that it was harmless, she returned to her nest. Photograph No. 3 is the picture that I got after the crane had settled down on her eggs. Because the film magazine jammed as I tried to change it, this is the only photograph that I got of this bird.

I spent a lengthy period in the blind taking many notes. When I came out, the crane was a very much surprised bird. Had I more film available, I could have photographed her when I got out into the open, for she lingered, hesitantly, alongside her nest for a while before flying off. I went back the next day with a different camera, but the bird would not return a second time. The cranes in flight (photograph No. 4) I got when they flew from a nest in the southern part of the Kissimmee Prairie. The lone crane (photograph No. 5) was filmed near Ft. Myers, where it had been somewhat tamed by the owners of a citrus grove; it was a "watchdog" reporting the presence of any stranger in the grove, calling loudly as is their habit.

—The End

Sandhill crane after she returned to her nest. Photograph number 3 in the text.



All photographs by the author.



Sandhill cranes in flight on the Kissimmee Prairie. Photograph number 4 in the text.

Young sandhill crane photographed on the Kissimmee Prairie.



Five Memorable Nature Experiences

By Haydn S. Pearson

IN 40 years of nature study, the most poignant scene I have ever witnessed occurred here at Sunny Acres in the winter of 1953. We have a sizable bird feeder just outside the picture window in our kitchen and we eat most of our meals in front of this window. Sometime during the forenoon of this particular February day, we noticed a purple finch sitting in the feeder; it acted as if it were unwell. All



day long it sat there. Occasionally it would take a bit of food and occasionally it moved a few inches.

Dusk's advance troops were moving down the slopes of Mount Crotched as Blanche and I sat by

the table over cups of coffee, discussing what to do. Should we take the finch into the house? Should we let nature take its course? As dusk deepened, the problem was solved.

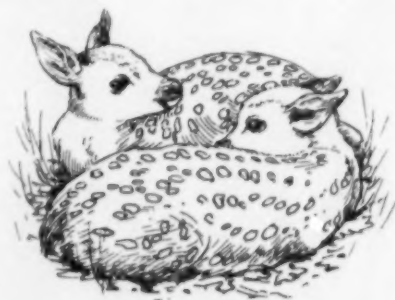
Suddenly, the finch took off. Slowly, laboriously, as if every beat of its wings was a desperate effort, the bird flew across the lawn. About a hundred feet from the house, it rose vertically into the air with wings beating very rapidly. It rose perhaps 15 feet. Then the wingbeats abruptly ceased. Straight down the small lifeless body fell. And in the semi-darkness we could barely see a tiny gray-black object on the snow. It was a strangely moving wildlife drama, and for a moment one felt the profound mystery of death. It is the only time I have seen a bird die.

* * * *

The most interesting nature memory goes back to 1915 when I was 14 years old. One sun-blessed June day I was crossing our farm's 30-acre meadow. The timothy was tall and lush, starred with daisies and streaked with scarlet devil's paint brush.

Suddenly, a doe sprang to her feet

a few yards in front of me, ran a few feet, and then stood and watched me. Entirely unsuspecting, I went forward. Within 15 feet or so, I came upon two baby fawns,



dotted and dappled. They were curled close together and I doubt if they had been born more than an hour. The doe circled around while I stood and watched a few minutes and then went on my way. I shall always remember that picture of the two little fawns curled in the green grass.

* * * *

The most beautiful picture is a difficult one to choose. I recall an autumn day in the White Mountains when the foliage was at its

most glorious. I was on the high road between Jefferson and Bethlehem, New Hampshire. Looking southward across the valley to the spreading mountain slopes, the panorama was a symphony of blended colors, a gargantuan oriental rug draped over the shoulders of the White Hills.

I recall a spectacular March storm many years ago. All night a freezing rain had fallen. By dawn the rain had stopped; the temperature dropped into the low 20's. At sunrise the Contoocook valley, the Temple Range, the nearby woods, and hedgerows were flashing with brilliant jewels. For hours that March day, the countryside was clothed in sparkling beauty. I remember how a grove of gray birches in the pasture across the field in front of the house were bent low in submission to King Winter. Fifty million years ago when birches were growing in the then warm arctic region, they had the unique power of resiliency built into their cells. A warm ocean current tempered the air of the vast arctic wastes, but ruthless winds tortured the land. The birches learned to grow in poor soil; they learned to bend before the wind.

By noon the temperature was rising, and all the afternoon I was outdoors in fields and woods watching and listening. Showers of ice fell from maples and beeches, oaks and evergreens. The load of ice fell from the birches and one by one the slender trees lifted themselves again.

However, if I were asked the one most beautiful nature scene I have witnessed, it would be a late May day when for the only time in years of bird study, I saw a sizable flock of scarlet tanagers. These beautiful scarlet and black birds are usually seen singly, in pairs, or at most in small flocks of four to six.

This warm, sunny May afternoon I was on a pasture hillside above the orchard. Around me were clumps of poplars, their half-opened leaves a misty gray-silver—reminding one of a Corot painting. Suddenly, a flock of 30 to 40 male scarlet tanagers settled in half a dozen poplars not 20 feet from the boulder on which I was sitting. They were scattered in the trees so that each was a glowing jewel against a background of silvery green. For a few unforgettable minutes, the beautiful birds

sat motionless. Never had I seen anything like it; never in the years since have I seen more than three or four scarlet tanagers together.

Illustrations by Walter Ferguson.



Is there humor in nature? There is, if you, as a human being attribute humor to a situation. I do not belong to the romanticists who casually attribute human traits to animals and trees. The beauty in nature is a natural phenomenon; the wonder of natural life is its superbly functional efficiency.

But animal life provides actions which can give one a chuckle. When I was in my 'teens, I was much interested in red foxes, and each spring and summer followed the activities in one or more dens on the side of Ball Mountain behind the farm.

There was one den in particular that was a favorite. It was situated so I could lie on the hillside above and with a pair of field glasses study the mother and pups. When fox pups are a few weeks old, they come from the den and play around the opening while the vixen is off hunting mice and rabbits.

This particular day the mother fox was stretched on the mound of sand before the den entrance. She was apparently having a snooze in the warm sunshine. Beside her lay just one pup, also apparently snoozing. I watched for perhaps half an hour before either one stirred.

Then the pup began to move about; the vixen remained motionless, head on paws, like a dog before a fireplace. The fox pup nosed around; it rolled a stone with its forepaw. It sat on its haunches and looked down the slope. Then sud-

denly it grabbed the mother's tail and began yanking, pulling, and twisting. It kept this up for a few moments; the mother unhurriedly lifted her head, took a long look at the obstreperous youngster, casually lifted a front foot and gave her offspring a solid cuff. The pup rolled over two or three times from the force of the blow, sat up, shook like a dog, came back beside its mother and lay down again.

.....

I enjoyed that, but first prize for a funny picture goes to a flock of partridge chicks. I had come upon them in an open woods; the mother bird gave the usual warning clucks; she went into her vaudeville act of drooping wings and half-hysterical actions.

I stood still and watched the chicks. It probably wouldn't happen again in a thousand instances. Those tiny balls of yellowish-brown fluff pushed their heads under the leaves, and their rear ends were all ex-



posed, facing me. I sat down on a stump to watch. The mother partridge did her best to distract me with frantic actions and noises. It was ludicrous to watch those motionless tiny rear ends; it was the funniest wildlife scene I have witnessed.

It is good to know that more and more people are interested in nature study. If life is a bit too much with you these days, perhaps some hours in the open will refill drained reservoirs of the heart. And as you walk the fields and woodlands, you will discover that you can hang a personal gallery with memorable pictures.

—The End



Drawings by Louis
Agassiz Fweries

American BIRD SONGS

The most popular and expertly recorded bird songs available! 111 bird songs from all over the United States, on two 12-inch, 33 $\frac{1}{3}$ rpm, vinylite records. Recorded by Drs. A. A. Allen and P. P. Kellogg of Cornell, world famous ornithologists. Write for free descriptive circular.

Attractive jackets. Each record, \$7.75

Also *Voices of the Night: The Calls of 34 Frogs and Toads of the United States and Canada.* 12-inch, 33 $\frac{1}{3}$ rpm. record. \$6.75



Ideal Christmas
gift for
bird lovers!

**Cornell
University
Records**

124 Roberts Place
Ithaca, New York

A division of Cornell University Press

How to Attract Birds



Getting Acquainted with Birds in a California Garden

Part I

By Frank F. Gander

MUCH information about the activities of birds has been gained by folks who have the patience and endurance to spend wearisome hours cramped in a bird blind; others have learned much by observations through high-powered binoculars or telescopes, but another method of bird study has proved useful for me in observing the birds in my garden. I get my birds to come close to me in my California garden by making an area attractive with cover, food, and water. Then I frequent the area so continuously that the birds come to consider me as a harmless part of their environment. That this is an entirely practical and comfortable way to study details of bird behavior, without expensive equipment, I have recently proved to my own satisfaction.

In September, 1951, I bought an acre of brushy hillside lying between San Diego and Escondido.* It has on it an oak tree and many massive granite rocks, and beginning with the following June, I was in the area much of almost every day. At first, the birds and other small life of my acre were typically wary, and allowed me only hurried glimpses of themselves as they darted away to cover. After I had been working around the place regularly for more than a year, many of my feathered neighbors and tenants grew surprisingly tame. This tendency to tameness has continued until many of my birds have grown so

accustomed to seeing me that they have lost much of the fear that they showed earlier. This gives me wonderful opportunities to observe their activities and to learn many things about their habits.

At the beginning, study of the birds was not an integral part of my plans as I was developing on this hillside an experimental and demonstration garden of plants from arid lands in a naturalistic planting. My plan was to show that it is possible to maintain a garden that is attractive throughout the year with little or no watering, even in our long dry southern California summers. But I have always been interested in birds, have studied them intensively, and have long considered that birds are a necessary part of any garden.

As soon as possible, I started feeding stations and arranged a birdbath and water drip. At that time no further attempt was made to tame the birds, but it soon became obvious that they were losing their wildness. If I sat down to rest, small birds hopped about near me as if I were of little more concern to them than the chair in which I sat. Even California quail, that are hunted each year during the open season in the wild chaparral adjacent to my garden, have come to look upon me as innocuous.

In the spring of 1953, several pairs of quail nested just outside of my property, and when the brooding females would leave their nests, they would hurry to my garden. The males did not stay and guard the nests at these times, but each came with his mate to watch for danger to her so that she might give most of her attention to getting food and drink. After drinking at the birdbath, which is in a depression on the top of huge granite rock that juts out from the hillside, the females had

Turn to Page 270

* The author has invited visitors to his "one-man retail nursery" where he stresses the use of California plants. Anyone traveling on U. S. Route 395 should turn off at the Felicita Park sign says Mr. Gander, and then follow his nursery signs until they reach his garden.—The Editor

When writing advertisers, please mention Audubon Magazine

AUDUBON MAGAZINE



FEED THE OUTDOOR BIRDS

These "free meals" will bring you enjoyment and happiness, for birds soon become daily visitors when given proper food. The birds appreciate a variety of wholesome seeds.

Food should provide the birds with proteins, carbohydrates and fats. A highly successful feeding station should contain seeds which are not only nutritious but especially favored by all winter birds. A combination of seeds will satisfy most birds. Seeds of sunflower, broken corn, cracked wheat, hemp, buckwheat, millet, milo maize, kafir corn, peanut hearts, hulled oats and certain other seeds are favorites of most birds. A little grit is needed to supply calcium and phosphorus.

Kellogg's Outdoor Seed mixtures provide a very adequate diet and are relished by most types of outdoor birds.

ORDER A SUPPLY TODAY

KELLOGG'S Audubon Society Mixture	
5 lbs.	\$ 1.35
10 lbs.	\$ 2.45
25 lbs.	\$ 5.50
50 lbs.	\$ 9.50
100 lbs.	\$16.00

KELLOGG'S Wild Bird Seed Mixture	
5 lbs.	\$ 1.10
10 lbs.	\$ 2.15
25 lbs.	\$ 4.50
50 lbs.	\$ 8.00
100 lbs.	\$13.00

KELLOGG'S "Economy Mixture"	
5 lbs.	\$ 1.00
10 lbs.	\$ 1.85
25 lbs.	\$ 4.00
50 lbs.	\$ 6.50
100 lbs.	\$10.00

"LITTLE JOE" Sunflower Seed Small, black and Meaty	
5 lbs.	\$ 1.25
10 lbs.	\$ 2.25
25 lbs.	\$ 5.00
50 lbs.	\$ 8.50
100 lbs.	\$14.00

Five, ten and twenty-five pound orders will be sent parcel post—charges paid. Orders for fifty, one hundred or more pounds will be shipped by freight—transportation charges paid.

Send check or money order to

KELLOGG SEED COMPANY

320 E. FLORIDA STREET, MILWAUKEE 1, WISCONSIN

5¢ per pound higher if west
of the Rocky Mountains.

"FINE FOOD FOR FINE BIRDS Since 1918"



Excelo Quality Wild Bird Food is a balanced blend of peanut hearts, sunflower seeds, other seeds and grain. No screenings or fillers. Prepared especially for wild birds. Bird tested and proven. None finer. Order a supply today.

EXCELO WILD BIRD FOOD

5 lbs.	\$1.50
10 lbs.	2.50
20 lbs.	4.50

EXCELO SUNFLOWER SEED

5 lbs.	\$1.60
10 lbs.	2.60
20 lbs.	4.60

EXCELO PARAKEET FOOD

A complete feed containing canary seed, millet, hulled oats and other beneficial seeds.

3 lbs.	\$1.50
5 lbs.	2.25

Prices Postpaid—5¢ per pound higher if west of the Rocky Mountains

EXCELSIOR FARM STORE

Box 354, Dept. 21, Excelsior, Minn.

AM-PE-CO SWINGING SUET BIRD FEEDER



Birds Love Bird Lovers

who supply them with a necessary food—SUET. Hanging from a slender branch, and mobile, sparrows, starlings and blue-jays will not alight on feeder.

Made of bright electrically welded hardware cloth (1½" mesh) . . . 3½" in diameter by 5½" high.

Enameled: \$1.20 Plain: \$1.10

Add 15¢ per feeder for mailing

New owners of company desire dealers.

AMERICAN MACHINE PRODUCTS CO.
Marshalltown, Iowa

a fairly definite course they followed in gathering food. First, they visited a patch of false pimpernel, *Anagallis arvensis*, to eat a number of the seeds; then, a stop at a vine of native vetch, *Vicia exigua*, to hunt for any seeds that might have been shed, and sometimes to jump up and peck at the more nearly mature pods in an attempt to force these to open and scatter their seeds. Their next stop was to eat the pickle-shaped seed capsules and acid leaves of the native "sour-grass," *Oxalis californica*.

From this plant, they followed two ways;

SQUIRREL PROOF

Feeders

Shipped prepaid partially knocked down without ¾" pipe support which can readily be gotten locally.

\$12.00



Free Folder

BIRD WATCHERS ANONYMOUS
141 Stamford Avenue, Stamford, Conn.

New SELECTIVE BIRD FEEDER

Feeds only the chickadee, nuthatch, and clinging type birds.

No perch for sparrow, starling, etc.

Squirrel Proof

Red Plastic (most attractive color to birds)—a colorful gift.



\$1.50 postpaid

Free sample seed. (No C.O.D. Please)

CHICK-A-FEED,
Box 89B, Rhinebeck, New York

An Ideal Christmas Gift
SQUIRREL-PROOF FEEDER

Easy to Fill 12½ in. High



Metal top, glass sided, hopper type feeder. Tipping roof protects food and birds from squirrels.

\$4.90 Postpaid
Write for free catalogue

BIRDHAVEN SALES

6 West Ave.

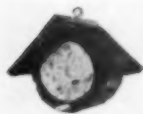
Darien, Conn.

one on either side of a large rock. Those following the right hand way would feed on the leaves, flowers, and pods of a small annual leguminous creeper, *Hosackia strigosa*, while the other route led through a patch of native sun-rose, *Helianthemum scoparium*, where the birds would feed on the fallen seeds. Whichever way they followed, each female soon worked her way up the hill to a large area of nearly bare rock where she finished her meal by stuffing herself on club moss, *Selaginella bigelovii*. During this time, the males did no feeding but were always on lookout duty, each moving from one vantage point to another to keep near his own feeding mate. When the female's appetite was satisfied, both birds usually flew back to the vicinity of the nest.

While the females were on the nest, the males remained on lookout duty perched on rocks or bushes that gave a broad view of the surroundings. Occasionally a male would leave his post to forage for food for himself and to get a drink, but in a very short time he was back again. One day a roadrunner, which nested in the chaparral north of the garden and daily hunted grasshoppers and cicadas in the fields south of the garden, blundered by chance into the vicinity of a quail nest. At once, the male quail jumped into the air and dived at the larger bird like a mockingbird after a cat, cackling excitedly all the while. Immediately he was joined by the female, and the two birds persisted in these aerial attacks until the roadrunner was driven well away from the area.

I do not doubt that the roadrunner would eat quail eggs and young if it had the opportunity, but after watching this incident, I feel that with both parent quail on duty, a predator's chance of dining on such delicacies is small indeed. Often, too, there were more than just the two parents on guard duty, for before incubation was completed in the nests in the area, two of these each had an extra male standing guard, and a third nest had two extra males helping with this duty. I suppose these were males which had not gotten mates or had lost their mates to predators or through other causes and were driven by instinct to stand guard over some brooding female. At first, the resident male would put up quite a battle and try to drive the interloper away, but each was so persistent that he was finally permitted to remain if he did not approach too closely to the male whose territory he had entered.

On occasion, even larger numbers of guards assembled around a single nest. When the pair which had trouble with the roadrunner brought off their brood, a full dozen quail of both sexes were perched on bushes and rocks all about to watch for danger. Some of these had



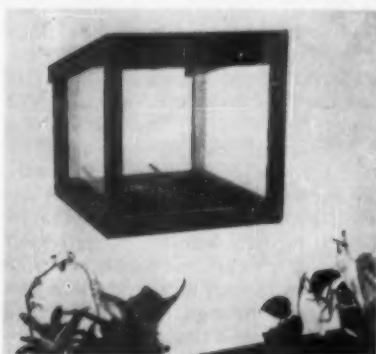
Hollow-Log Feeder

Beautiful rustic feeder with copper bound ridge, hanging ring. Filled with peanut hearts, seed, grain and beef suet mixture.

Attractively Gift Boxed \$3 deliv'd
Free literature on Hollow-Log Birdhouses,
Windmills, Sundials, etc.

EARL DOUGLASS, Dept. A, Red Creek, N. Y.

Wonder Window Feeder



Highly effective. Terrific bird attractor. Fastens firmly on any pane of glass 10" x 10" or larger with durable rubber suction cups. Especially designed for picture and storm windows because it brings the birds "inside" and feeds squirrels and cats. Equipped with heavy duty plastic windows and weather resistant masonite tray and roof. Tray holds over a pound of seed. A winter delight for children and grownups alike. \$5.95 prepaid and insured, including instructions. No C.O.D.s please. Can also be gift shipped with your greeting card enclosed.

William Goadby

LONG RIDGE ROAD, WEST REDDING, CONN.

Mr. & Mrs. Martin Want This

("THE GOOD LUCK BIRDS")

house in your yard next spring. Be ready to welcome them. Buy now for Xmas.



SIZE
22" x 37"

Legend has it that Martins at nest in your yard are an omen of good luck for you and yours. Welcome these fascinating birds.

FEATURES

- Simple assembly of a complete kit
- Strong marine plywood construction
- Light in weight • Fine ventilation
- Proper drainage • Attractive on pole or as cupola • Unique and easy cleaning features • Whole interior removable • 24 roomy nesting boxes.

Knock Down Kit
Everything Supplied
Except Pole

\$34.95

Freight Prepaid

Send in your order today without delay

RUYL PRODUCTS CO.
3818 Norriswood Ave., Memphis, Tenn.

well-started young of their own but still they spent a large part of the day watching for a threat to this new brood. The male stayed with the female and the chicks, letting his neighbors watch for danger. These young, which probably hatched during the early morning hours judging from previous experience, did not move far from the nest during this first day, so I placed a shallow saucer of water to which the parents could lead them. In a few days, they drank at the birdbath in my garden as did other broods in the neighborhood.

When this brood was about three days old, and only the parents were in attendance, they were feeding in a grassy area which was in the regular feeding territory of a sparrow hawk. This little falcon would perch on the overhead wires and watch for grasshoppers on which to pounce. Never have I seen this kestrel with anything that resembled a bird, but always, except for one small mammal and occasional lizards, he had grasshoppers or similar small prey. Yet when he left the wires and started down in the general direction of the baby quail, the father quail did not wait to ask the falcon's intentions but started right up to meet him. When the kestrel saw this, he turned in mid-air and flew back up to his perch on the wires with the male quail pecking at his tail feathers. The quail then spread his wings and glided back to the ground, war-whooping all the time and for a while afterward.

A few days later another family of quail with nearly half-grown young was attacked by a female Cooper's hawk just outside my fence. The male of the family gave a warning cry, then dashed into cover and remained hidden as long as the hawk was about. Three of the young birds were in a rather open brush and tried to hide in a thin clump that gave but poor protection. The hawk could see these three and kept circling around the bush and dashing in attempts to clutch one of them. It is not my policy to interfere with a predator when it is after prey, but these chicks were peeping in such terror, and the hawk seemed so relentless, that I became excited, grabbed some rocks, rushed up to the fence and drove the hawk away. It was several minutes before the parents dared to come out of hiding and call their brood together again.

Later in the season, on three occasions I did see a male quail risk his life with a Cooper's hawk for the safety of his covey. Each time the hawk was a male in immature plumage, perhaps the same bird, but whether this seemed a less terrifying foe to the quail than did the big female, I cannot say. All three incidents were very similar, so the description of one will suffice.

A covey of several adults and a number of nearly grown young were feeding

Feed the birds you like!



PATENTED

Actual photograph of Cardinal feeding

At last—a scientifically designed bird feeder. Fully adjustable to feed Cardinals, Grosbeaks, Chickadees, and other desirable birds while restricting sparrows. One filling lasts many days—seed fully protected from rain and snow—flow of seed is automatic—hulls kept out of seed hopper and also off your lawn—eye safe for birds—solid brass and non-rust hardware—clear view from every angle—a truly beautiful garden accessory.

BEVERLY SPECIALTIES CO.

10331 S. LEAVITT CHICAGO, ILL.
FEEDER \$7.75 POST PAID
STAND FOR FEEDER WITH
ENAMELED SQUIRREL GUARD \$6.50



\$5.45
ppd

2 for \$10

duncraft

**FLIGHT
DECK**

LURES WILD BIRDS

TO YOUR WINDOW!

• an unusual gift!

See and enjoy beautiful wild birds just inches away, and feed them without going outdoors! Flight Deck attaches to window sill . . . turns children, shut-ins, practically anyone at all into "armchair" bird watchers. Wonderful for amateur photographers! Sturdy, weather-proofed; hand crafted and finished in green enamel. It's a large 17 1/2" x 15 1/2" . . . has feeding stick, drinking cup, 4 seed wells, and white perch rails. Attaches and detaches easily—no tools! Satisfaction guaranteed; all orders acknowledged! WE PAY POSTAGE.

Order now for yourself . . . as Christmas gifts for friends! Send in your Christmas list and cards, or we will enclose gift card for you and mail directly.

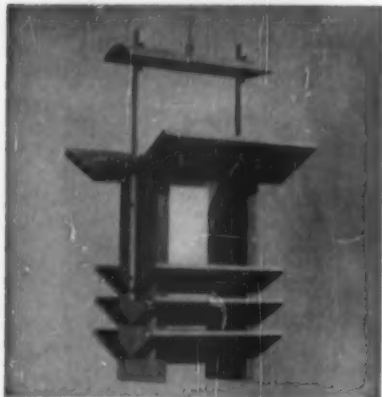
RECOMMENDED & APPROVED BY NATIONAL AUDUBON SOCIETY

duncraft

Dept. A-12, Dunn Bldg.
Pensacola, New Hampshire

When writing advertisers, please mention Audubon Magazine

America's most beautiful BIRD FEEDERS



PERFECT CHRISTMAS GIFT FOR
BIRD-LOVING FRIENDS!

Add new beauty to your grounds with a Lindstrom feeder. Made of genuine California redwood; gains in beauty as it weathers. Solid brass fittings. Approved by National Audubon Society. Hanging feeder (illustrated) is over 20" high, holds 2½ quarts. Send \$10.95; check or money order. Others from \$5.95 to \$13.95; all assemble easily. For free folder, write to

"STRICTLY FOR THE BIRDS"

37 Rock Hill Road • Armonk, N. Y.

IT'S A "BUSHNELL" FOR THE BIRDS

Stop
being
confused



Free New Book tells all about
High Power Binoculars

Know
before
you
buy!

Newest Precision Optics give a million thrills for every trip, sport and pastime! America's greatest values. 33 models \$9.95 to \$125. Guaranteed savings. Free Trial Plan. See your dealer today!

Bushnell
BINOCULARS

AMERICA'S MOST DISTINGUISHED SPORT OPTICS
Dept. J 11 Bushnell Bldg., Pasadena 1, Calif.

FILL OUT! MAIL TODAY!

NAME _____

ADDRESS _____

CITY _____

STATE _____



in an open grassy area with scattered bushes just south of my garden. This is a favorite foraging area but the cover is poor and offers little protection against predators. The hawk came in low from a northerly direction and was almost on the covey before one of them warned the group. The hawk struck and missed, and as it struck, a male quail that the hawk had passed over took off at high speed back in the direction from which the hawk had come so that the larger bird had to turn before starting in pursuit. The pursuer gained rapidly, but the quail had enough

lead so that it was able to dash headlong into a thick clump of sumac in the chaparral north of my garden before it could be overtaken.

Of course, this gave the rest of the covey a chance to scurry into thicker cover a short distance from where they had been trying to hide. If this had happened only once, I should have considered that the quail had done so in frantic terror, and the value of its act to the covey was entirely fortuitous. But after seeing the same event take place three times, I was convinced that the male had offered himself as a decoy to lure the hawk away from the threatened covey.

All through the summer and fall, whenever there was damp soil under the shrubs, the quail would gather for a soil bath. This could scarcely be called dusting for they definitely preferred soil with moisture in it, and they would pack themselves in such spots and shuffle the damp earth through their feathers for half an hour at a time. Because of this, it has not surprised me to notice that no quail ever shows any inclination to bathe in the birdbath.

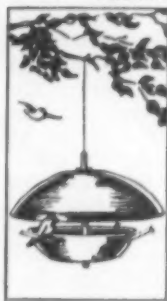
Many species do use the birdbath regularly, however. Brown towhees and rufous-crowned sparrows are the most ardent bathers, splashing until they are so completely soaked that they can barely fly. These two species are typically birds of the dry chaparral where usually no water is available in the summer, yet here they are frequent bathers. Some of their associates are much less given to bathing. California thrashers and wren-tits will bathe in wet vegetation or under the sprinklers, but they seldom go in the birdbath. I have seen Bell's sparrows bathing only once, just a quick dip, and then out and away.

Most of the winter birds bathe often and thoroughly. White-crowned, golden-crowned, and chipping sparrows, Audubon's warblers, and western bluebirds, all seem to enjoy the water. Least goldfinches, house finches, and lark sparrows bathe regularly, too. Mockingbirds, Say's phoebes, and western meadowlarks insist on having the bath to themselves whenever they are bathing, but many other species crowd in together. A tight cluster of goldfinches, western bluebirds, and house finches, all splashing at once, make a colorful grouping, but even more thrilling to me was the sight of some 20 bush-tits all bathing in a space no larger than a page of this magazine. This is the only time I have seen bush-tits in the birdbath, yet they are with me daily, and even nest in my oak tree.

Not many birds have nested in my garden so far. The cover is not dense because most of the shrubs and trees are young, and there are many human visitors to my garden. A pair of ash-throated flycatchers nested in a bird box, a Bewick's wren built a nest in a can

AN IDEAL GIFT FOR CHRISTMAS

SQUIRRELS STAY OUT



CHICKADEES,
NUTHATCHES,
TITMICE
Fly in and Out
The seed stays dry.

Price Includes
WEATHERPROOFED
FEEDER AND
WINDOW BRACKET
COPPER WIRE
BOWL FULL OF SEED

All Post Paid

1ST FEEDER \$5.95

2ND FEEDER \$4.95

MELLOR DOME FEEDER

Dept. A., Englewood, N. J.

A GIFT FOR BIRD LOVERS

Dodson's
MODERNIST
FEEDER



Filled with seeds and tidbits, it says "Merry Christmas" to winter birds. Made of quality pine with green aluminum (rustproof) roof. Open sides. Equipped with grain hopper and sust hook. Upper part provides shelter in stormy weather. 23" square, 14" high. \$9.95 f.o.b. Kankakee.

Order now for a friend or yourself

Write for Catalog of Dodson Feeders and Bird Houses.

DODSON BIRD HOUSE CO.

483 N. Harrison St., Kankakee, Ill.

For Christmas
this year—Give an
Audubon
Hummingbird
Feeder

- Easily installed.
- Brilliant red plastic flower attracts birds from afar.
- Completely weatherproof.
- Thousands of satisfied users.

Audubon Societies and
dealers inquire now.

Price \$1.95 postpaid.

AUDUBON NOVELTY CO.
Medina 2, New York



When writing advertisers, please mention Audubon Magazine

AUDUBON MAGAZINE

in a shed, the bush-tits and brown towhees have built in my oak tree, and several pairs of least goldfinches have nested here. One little goldfinch built her nest in a bush beside a path where visitors were watching her all during the building period. After the eggs were laid, mothers would lift their children to see the brooding bird, and the bird did not leave the nest, even though the child's face would only be two or three feet away.

Abundant as the goldfinches are, they have not learned to feed at the three feeding stations. A host of other species come to these, however, and offer wonderful opportunities for observation. Two of these stations are on rounded granite rocks next to the wild chaparral, and on these usually I spread baby chick scratch feed only, which is a mixture of corn, oats, and other grains broken into small bits, including a little whole millet. Wren-tits, brown tow-

hees, rufous-crowned sparrows, California thrashers, and California quail feed on these rocks the year around. From October until April they are joined by white-crowned, golden-crowned, lark, and Brewer's sparrows, and sometimes other birds. I was not surprised to see wren-tits feeding on this grain, for on a number of occasions in the past, I have trapped them for banding with just such bait, but it did surprise me to see a mockingbird eating a little grain at times.

So far, I do not have a resident mockingbird, and the transient ones do not often find the third feeder, which is a wooden tray hung by wires from a low branch of my oak tree. Here I offer a more varied fare by adding peanut hearts, sunflower seeds, dried currants

Continued on Page 282



CAPE COD FEEDER

With 2 suet cakes and a fill of Packard Bird Food **\$6.75**

Please add postage on 8 lbs.

This and a dozen other feeders shown in our new catalogue, sent free on request. Full of Christmas suggestions for garden and bird-loving friends.

Winthrop Packard, Plymouth 3, Mass.
"Everything for Wild Birds"

Attract Wild Birds NOW!
With this Guaranteed Automatic A-W Bird Feeder

Attracts Wild Birds the year around. Sturdily built with plastic seed container 5 1/2" x 7". Hangs anywhere.

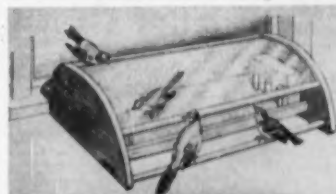
Pat. 2,379,841

End Squirrel Nuisance... with A-W's "Squirrel's Defeat" Feeder. Birds will feed from this feeder in complete safety. Made of weather resistant materials.

Free Folder. Send name and address for complete folder.

audubon workshop
Wander Lake, Ill.

Fill Your Yard With Colorful Song Birds!



WINDOW WONDERLAND

This new feeder features a gracefully curved, non-shatterable skylight roof which protects seed and cake from weather and permits full observation of your guests. Attaches easily to outside of window sill.

No. W-56—\$7.95 (not filled)
(add 75c postage)

BIRD'S DINNER PAIL



A "hang anywhere" feeder of sturdy wire. Rubber covered perches. A simple, unique design that all birds will use. Holds cylindrical food cake of seed and suet.

No. DP-4—\$2.75 (filled)
(add 25c postage)

HYDE BIRD FEEDER CO.
56 Felton Street Waltham 54, Mass.
WRITE FOR FREE CATALOG

WELLES L. BISHOP COMPANY

NEW SUBURBAN LINE

Finished in light redwood stain. Water Repellent—Everlasting

#420 Totem Pole Feeder. Complete with Suet Cake. Replace cake through trap door at bottom. Cake weighs 12 oz.

\$1.95 each

Refill cakes—3 for \$1.00

#430-S Wrought Iron Small Bracket
95c each



#401 Lantern Feeder. Stained with a Redwood finish. Water Repellent. Can be either hung or fastened on pole.
\$5.00 each

Welles L. Bishop Company
1245 East Main Street, Meriden, Connecticut
Write for Free Catalog

EXCELO



COMBINATION RAMBLER TYPE SEED AND SUET FEEDER

Sturdily constructed from selected wood. Water repellent, and stained beautiful Redwood shade. Can be post mounted or hung from bracket. Satisfaction guaranteed. \$6.95 postpaid. Bracket 40¢ extra.

Size 15 1/4" x 9" x 8"

EXCELSIOR FARM STORE

Box 354 Excelsior, Minnesota

Everything
about our LIZARDS, FROGS,
TOADS, TURTLES & SNAKES



Here, in a big, fascinating new book by a scientist, known for his acute observation and the clarity and simplicity of his writing, are the life histories, habits, and idiosyncrasies of one of the most interesting of our native fauna.

Odd facts, new research, and intriguing folklore—even instructions on keeping these animals as pets—make this authoritative work not only one of the most enlightening of recent books on nature, but one of the most entertaining to read.

THE NATURAL HISTORY of NORTH AMERICAN AMPHIBIANS AND REPTILES

By
JAMES A. OLIVER
Curator of Reptiles,
New York Zoological Society



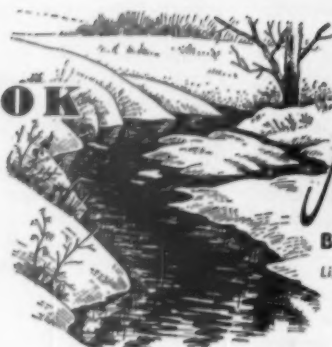
The illustrations, drawn from life by Lloyd Sandford, staff artist, New York Zoological Society, are themselves a major contribution to natural history.

304 pages, \$6.95

**D. VAN NOSTRAND
COMPANY, Inc.** 250 Fourth Ave.
N. Y. 3, N. Y.



BOOK



Notes

By Monica de la Salle

Librarian, Audubon House

WILD AMERICA

By Roger Tory Peterson and James Fisher, Houghton Mifflin Company, Boston, Mass., 1955. 8¾ x 5¾ in., 434 pp. Illustrated. Indexed. \$5.00.

There is an old French saying to the effect that voyages are like Spanish inns, you find in them what you have brought with you. When two outstanding wild-life experts tour America from Newfoundland to Florida, Louisiana, California, Alaska, and the Aleutians, the record of their trip is more than a narrative: the exceptional knowledge they bring to it creeps into every episode, with the result that the reader is treated, so to speak, to wide-screen entertain-

ment, glimpsing sidelights from the corners of his eyes. One of the interesting features of the book is the dual outlook: Mr. Peterson, an old hand at exploring the natural history of his country, is the weathered guide, while Mr. Fisher, on his first visit to America, sets down the marveling impressions of a pilgrim from the Old World. They have produced a book so packed with facts, amusement, enthusiasm, and humor, that once opened it is hard to put down. Since both authors are ornithologists, birds are naturally the prime attraction (their 100-day list totaled 503 American and 65 Mexican species, thus breaking Mr. Guy Emerson's long-held world record of 497 species in a year). However, mammals, reptiles, amphibians, fishes, botany, ecology, national parks, Indians, and many other subjects also claim their attention, and the problems of conservation are never far from their minds. In "Wild America," we have the kind of live, first-hand information that is the spice of any travel—a wildlife Baedeker with a personal touch. The black-and-white illustrations are Mr. Peterson at his best, and there are more than a hundred of them.

A panorama of Americana, caught and preserved with affection and fidelity



OUR VANISHING LANDSCAPE

By Eric Sloane

In this beautiful book, a companion piece to *American Barns and Covered Bridges*, Eric Sloane, with informative background history and charming sketches, has preserved another part of America's fast-disappearing landscape—the roads and turnpikes, the tollgates and milestones that our forefathers built. These men constructed with heart and mind, engraving upon the countryside the vigor of their art and the soundness of their design. Their post roads, their corduroy roads, their directive signs, their stone walls and rail fences, their bridges and gristmills—these are the essence of this nostalgic book, a splendid mirror of our heritage.

128 pages, 75 drawings by the author, \$3.95.

Just published • At all bookstores

WILFRED FUNK, INC.
153 East 24th Street, New York 10

HOW TO BUILD BIRD HOUSES AND FEEDERS AND HOW TO ATTRACT BIRDS TO YOUR GARDEN

By Walter E. Schutz, Bruce Publishing Company, Milwaukee, Wisconsin, 1955. 9¼ x 6¼ in., 134 pp. Illustrated. Indexed. \$2.95.

Detailed drawings and a precise list of the materials required accompany the instructions for building 14 different models of feeders, more than 20 different nesting boxes and shelves, and a concrete birdbath, make up the major part of this highly practical manual. Suggestions about the color, mounting, spac-

Turn to Page 276

"AUDUBON . . . THE NATURALIST" Just Released!

Roger Tory Peterson wrote the exciting story of America's great painter of birds and other animals. Live footage and original folio beautifully photographed in attention getting color.

For all ages—12½ minute Kodachrome Prints, \$125

ROY PINNEY PRODUCTIONS
19 East 57th Street New York 4, N. Y.

When writing advertisers, please mention Audubon Magazine

AUDUBON MAGAZINE

THE MOST COMPLETE
THE MOST LAVISH
THE MOST
AUTHORITATIVE



BIG 8½" x 11"
handsome gift format

Just out! The magnificent new LIVING MAMMALS OF THE WORLD

THERE'S NEVER BEEN A BOOK LIKE IT BEFORE!

*Every living mammal known to science
described with knowledge and wit*

by IVAN T. SANDERSON

**330 spectacular photographs
190 in breathtaking full color**

There is simply no other book on mammals as comprehensive, as scientifically accurate as this—every living mammal discovered by man is included! No expense has been spared to make this the finest mammal book ever published. It's a book no one interested in animals can afford to be without. Every nature lover will find it a constant source of information and delight. It's a book you'll look at again and again for its unsurpassed pictures—many of animals never before photographed—by more than 50 world-famous photographers including John Markham, Roy Pinney, Cy La Tour, Ylla, Ernest P. Walker, and others. The brilliant, scholarly, and delightfully readable text by Ivan Sanderson, noted author and zoologist, provides the most up-to-date, scientifically accurate information available about these living mammals. It's a beautiful book you'll want for yourself and as gifts for nature-loving friends of all ages.

"BEAUTIFUL
...UNIQUE
...AMAZING."
—ROY CHAPMAN ANDREWS



A miracle of book manufacturing—8½" x 11",
200,000 words, 330 photographs, 190 in full
color—all for **ONLY \$9.95**

**ORDER YOUR COPY NOW. AND GET YOUR
GIFT COPIES, TOO! USE HANDY COUPON**

— **USE THIS COUPON NOW!** —

HANOVER HOUSE
604 Franklin Ave., Garden City, N. Y.

Please send me _____ copies of **LIVING MAMMALS OF THE WORLD**. I will remit \$9.95 plus 25c cash for postage and handling. If not delighted, I may return the book within 10 days and owe nothing.

NAME _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

☐ **SAVE POSTAGE!** Check here if \$9.95 each is enclosed. We pay postage and handling. Same money-back guarantee of full satisfaction.



New Borzoi Books on Nature

MAMMALS OF THE WORLD THEIR LIFE AND HABITS

By **FRANCOIS BOURLIERE**, author of *The Natural History of Mammals*. A magnificent, extra-large volume which brings the reader dramatically face to face with the world's mammals as they are to be observed in their natural habitat. With more than 100 stunning photographs, by the world's leading animal photographers, 24 in full color, and 34 line drawings, the text by a noted authority in mammalian biology and behavior. \$12.50

THE REPTILE WORLD

By **CLIFFORD H. POPE**. A natural history of the snakes, lizards, turtles, and crocodilians. A comprehensive survey by one of the world's leading herpetologists and a handsome and fascinating book for layman and specialist that will replace all other books in the field. With over 230 photographs, for the most part taken in the reptiles' natural habitat. \$7.50

SPIDER, EGG AND MICROCOSM

By **EUGENE KINKEAD**. Introduction by E. B. White. Three strange and wonderful realms of science, and three remarkable men who have explored them—spiders and Dr. Alexander Petrunkevitch; avian eggs and Dr. Alexis Romanoff; microphotography and Dr. Roman Vishniac. Illustrated. \$4.00

At your bookstores

ALFRED A. KNOPF, Publisher
501 Madison Ave., N. Y. 22

AKKBAKKEBAK

ing, and location of houses and feeders are given, along with information on food for birds—including a recipe for suet cakes—and on planting to attract them.

ADVENTURING WITH BEEBE

By **William Beebe**, Duell, Sloan and Pearce, N. Y., Little, Brown, Boston, Mass., 1955. 8¼ x 5½ in., 283 pp. Illustrated. \$4.50.

Selected from his published writings by the author himself, this anthology is representative of his interests which extend all the way from "lofty jungle trees to half a mile beneath the sea." The numerous admirers of Dr. Beebe's lively adventures and imaginative writing will only regret that more of his "best" is not included. At any rate, the selection is excellent.

SALAMANDERS AND OTHER WONDERS: STILL MORE ADVENTURES OF A ROMANTIC NATURALIST

By **Willy Ley**, Viking Press, New York, 1955. 8¾ x 5¾ in., 293 pp. Illustrated. Indexed. \$3.95.

Readers familiar with Mr. Ley's unique approach to science—his flair for odd facts and unsolved problems, combined with minute accuracy and a consummate art of bringing matters to a logical conclusion—will know that an account of cave salamanders in which not only the controversy over inheritance of acquired characters, but a suicide and a movie are involved, is entirely to be expected. Other "stories" in this new book deal with giant tortoises, the Abominable Snowmen of the Himalayas, the man-eating tree of Madagascar and other botanical lore, and the black European ibis. They are all lively and well-written.

OUTDOOR HAZARDS, REAL AND FANCIED: A GUIDE TO OUT-OF-DOORS SAFETY FOR CAMPERS, HIKERS, HUNTERS, FISHERMEN, AND TRAVELERS IN THE UNITED STATES

By **Mary V. Hood**, The Macmillan Company, New York, 1955. 8½ x 5¾ in., 242 pp. Illustrated. Indexed. \$3.95.

Many of the dangers imagined by the persistent city-dweller as reasons for avoiding the wilderness turn out, on consulting this novel and useful volume, to be nothing but legend. The real difficulties and problems to be met, however, are clearly outlined, and much of the information provided should prevent the necessity for getting out the first-aid kit. For such troubles as should arise, advice about the first steps to take is also given. Altogether, this is a book campers and outdoorsmen will welcome.

"Brilliant"

—NEWSWEEK

A MANX Shearwater, taken across the Atlantic and released more than three thousand miles from its nest, was back on its egg within twelve and a half days. How did it find its way?

Dr. Matthews has spent several years investigating this ability of birds to return home, both after migrations and after experimental scattering. He presents here the results of his critical research in the movements of birds.

Bird Navigation

By **G. V. T. MATTHEWS**

Cambridge Monograph in
Experimental Biology 3

At your bookseller's, \$2.50

CAMBRIDGE UNIVERSITY PRESS
32 East 57th St., New York 22, N. Y.

Birds and Men

AMERICAN BIRDS IN SCIENCE, ART, LITERATURE AND CONSERVATION 1800-1900

ROBERT HENRY WELKER, in his entertaining account of birds in America's past, tells how America discovered its birds; discusses the Americans who studied, painted, and wrote about them—Bartram, Peale, Wilson, Audubon (with new light on the Wilson-Audubon feud), and Thoreau, Emerson, Whitman, Burroughs; describes how fashion exploited them—and how the people rose, finally, to protect them. An unusual perspective on American cultural history, engagingly presented.

"Mr. Welker's analysis of Audubon's bird paintings is the best that I have ever read."—DONALD CULROSS PEATTIE

A Belknap Press Book 41 illustrations \$5.75



Ask your bookseller, or write to
HARVARD UNIVERSITY PRESS
44 Francis Ave., Cambridge 38, Mass.

When writing advertisers, please mention Audubon Magazine

AUDUBON MAGAZINE

PHILOSOPHICAL LIBRARY BOOKS

The Expression of the EMOTIONS in Man and Animals

by CHARLES DARWIN

with a preface by
MARGARET MEAD

Darwin approached the subject of expression of the emotions with all the force of a powerful imagination dealing with a new field. His list of ways in which the subject might be studied has not been improved upon and indeed has hardly yet been attempted: (1) the study of infants, (2) the study of the insane, (3) the use of photographs of emotional expression submitted to different judges, (4) the study of great paintings and sculpture, (5) the comparative study of expression and gesture among the different peoples of the earth, (6) the study of some of the commoner animals.

From the CONTENTS

Means of Expression in Animals. Special Expressions of Man: Suffering and Weeping. Low Spirits, Anxiety, Grief, Dejection, Despair. Joy, High Spirits, Love, Tender Feelings, Devotion. Reflection—Meditation—Ill-Temper—Sulkiness—Determination. Hatred and Anger. Disdain—Contempt—Disgust—Guilt—Pride—Helplessness—Patience—Affirmation and Negation. Surprise—Astonishment—Fear—Horror. Self-attention—Shame—Shyness—Modesty: Blushing.

Photos and other illustrations \$6.00

MAN and the WINDS

by E. AUBERT DE LA RUE

The author, a distinguished French scholar, has travelled widely and gives a survey of winds all over the world, showing how man has used them, or has protected himself from them or adapted his habitation to them. The book also shows the emotional appeal which has earned for the winds a large place in literature and how they have affected the course of history and the progress of civilization.

CONTENTS

Types and Names of Winds—Régime Winds and Accidental Winds—The Föhn—Hurricane Winds—Wind as a Determining Factor of Climate—Physiological Effects of the Wind—Adapting Dwellings to the Wind—The Wind as a Transporting Agent—Sand Storms—Soil Erosion by the Wind—The Peril of Dunes—The Wind as a Source of Energy—Sailing Ships—The Study of the Winds—The Wind and Aviation—Benefits and Drawbacks of the Wind—The Protection of Cultivated Land and Forests—Mythology and Legend.

Richly illustrated \$6.00

Mail to your bookseller or to:
PHILOSOPHICAL LIBRARY, Publishers
15 E. 40th St., Room 2455, New York 16, N. Y.

Please send the following

—The Expression of the EMOTIONS in Man and Animals @ \$6.00

—Man and the Winds @ \$6.00

Expedite shipment by prepayment.

Name _____

Address _____

THE UNDERWATER NATURALIST

By Pierre de Latil, Houghton Mifflin Company, Boston, Mass., 1955. 8½ x 5½ in., 275 pp. Illustrated. Indexed. \$3.50.

Fish-watching is a comparatively new avocation, made possible in recent years by lightweight diving equipment. Though some information on the habits of fishes has been gathered through the centuries, this is the first time, so far as we know, that their behavior "in the wild" has been the subject of a book. Direct observations (supplemented by information gathered from the literature) were made in the Mediterranean, whose clear, warm, and tideless waters are ideally suited for this purpose. Among the topics discussed are the ability of fish to learn and remember, their intelligence and adaptation to the threat of undersea hunters, and the mating and nesting behavior of the species known as wrasses. This glimpse of an underwater world, still practically as unknown as Mars, is fascinating.

Dates of Christmas Bird Counts

Allan D. Cruickshank, editor of the Christmas Bird Counts for Audubon Field Notes, has asked us to publish the dates during which the Christmas Bird Counts should be taken. The period is from, and including, December 24, 1955, to and including January 2, 1956. Because of a change in the rules, governing the publication of your count, Mr. Cruickshank advises all participants to be sure to read the Christmas Bird Count Rules, published on the back cover of the June 1955 issue of Audubon Field Notes. Those who do not have a copy of this issue may get one by sending their request and 25 cents in coin to Miss Elizabeth Manning, Associate Editor, Audubon Field Notes, National Audubon Society, 1130 Fifth Avenue, New York 28, N. Y.

EXHIBITION at Audubon House

"BIRDS OF VENEZUELA"

Original Water Colors
by Kathleen Deery de Phelps

(November 3 through December 16)

Ready
January
1956

a complete revision of . . .

A Laboratory and Field Manual of ORNITHOLOGY



- informative
- practical
- interesting

A FIELD MANUAL FOR:

- Students
- Professional Ornithologists
- Amateur "Bird Watchers"
- Elementary College and University Courses

by

OLIN SEWALL PETTINGILL, JR.

A selection of the more important aspects of ornithology are contained in this revised edition. Its scope has been extended so as to be of equal advantage in the United States or Canada and to give a wider coverage of ornithological work in the entire world. Each of the twenty-two sections is an independent unit. Instructors may, therefore, select topics which are particularly applicable to their individual situations. Cloth Bound; Highly Illustrated; 8½"x11" Size; Photo Offset; Price Open.

Advance Orders
Accepted Now By--

Burgess Publishing Co.
426 South Sixth Street
Minneapolis 15, Minnesota

youngsters
will love
these animal
and nature



true books

from **Childrens Press**

all true books are
in color, big type
for beginning
readers, Ages 5-9 **\$2.00** each

The true book of

ANIMAL BABIES by Illa Podendorf tells of baby animals from goslings to elephants who need care while young.

The true book of

DINOSAURS by Mary Lou Clark is the fascinating story of the big animals who roamed the earth before the time of man.

The true book of

INSECTS by Illa Podendorf, in full color, brings to life the familiar and some unfamiliar insects.

The true book of

SEASONS by Illa Podendorf is an exciting version of the changing seasons and details the way in which all living things adapt to them.

The true book of

WEEDS and WILDFLOWERS by Illa Podendorf accents the beauty of wildflowers, conservation and the recognition of weeds of the dooryard, roadside and in gardens, fields and woods.

If not at your favorite bookstore, we will send post-paid.



Childrens Press

Jackson & Racine, Chicago 7, Ill.

Children's Books

By Dorothy Edwards Shuttlesworth



THE power to capture a child's imagination and stimulate his interest lies within nature and science books just as it does in books based on historical facts. The mood of the writing, the quality of the illustrations, and the general make-up of a volume, all contribute to the young reader's enthusiasm—or lack of it—for a subject. It is interesting to hear a successful writer of adult fact and fiction discuss this problem of holding a child's interest. John O'Hara does so in a recent magazine article after "showing" the United States to his 10-year-old daughter. You must bear in mind, advises Mr. O'Hara, that the very things that qualify you to be a guide—your supply of information, your experience and enthusiasm—can also make you a terrible bore. Mr. O'Hara did not object to some comic books being included in his daughter's traveling library. In fact he sees how they may be valuable as an interest-gauge for, he notes, when a child turns to comic books, it is a warning that what you are offering as instruction is being rejected as tedium. His conclusion is, "The most you can hope for is that the tourist you are conducting will get some idea of the vastness and the wonders."

WONDERS OF THE WILD

By Jacquelyn Berrill, Dodd, Mead and Company, New York, 1955. 9 1/4 x 7 in., 85 pp. Illustrated by the author. \$2.50.

Any boy or girl whose hopes for a trip to a zoo have been unfulfilled should find this book a good substitute. On the other hand the delightful descriptions of the habits and homes of the various animals will make readers all the more eager to see these wondrous beasts in person. The book begins with a brief discussion on why the animals live where they do, how they defend themselves, how they play, and how they express themselves. The reader is then taken in turn to each of the great continents—Africa, southern Asia, and North and South America—where he meets the most intriguing mammals of the land and observes them in their natural settings.

RUFUS

By Dorothy Childs Hogner, J. B. Lipincott Company, Philadelphia and New York, 1955. 9 1/2 x 7 in., 72 pp. Pictures by Nils Hogner. \$2.50.

The red fox "hero" and his friends have a great deal to say for themselves in the course of this story. But their conversation builds up a most amusing situation wherein Rufus falsely boasts of knowing the location of an enormous chicken farm, and then tries to find one.

The seven-year-old children to whom we read "Rufus" found events quite hilarious when the fox leads his friends to a farm where mink rather than chickens are raised, and where his old enemy Tallyho, the hound dog, is on guard. This group of children, when questioned, definitely voted in favor of stories where the animals speak the language of humans. The lively pictures of Rufus, his raccoon and skunk friends and other animal characters, by Mr. Hogner are delightful.

CHICKENS AND HOW TO RAISE THEM

By Louis Darling, William Morrow and Company, New York, 1955. 8 1/4 x 6 1/2 in., 64 pp. Illustrations by the author. \$2.00.

Adults are not alone in dreaming dreams of "a little chicken farm in the country." Many children, too, like the idea of having one. And even when the chance of achieving such an ambition is practically non-existent, it is fascinating for a young chicken-fancier to read about how it can be done. This attractive book by Mr. Darling tells how raising chickens can be a profitable and interesting hobby, what kinds are easiest to raise, their housing, food requirements, and how to candle an egg. Besides this and other practical information, the reader gains fresh insight into the miracle of nature in constantly creating and perpetuating new life.

WHIRLY BIRD

By Aylesa Forsee, J. B. Lippincott Company, Philadelphia and New York, 1955. 8 x 5½ in., 224 pp. Illustrated by Tom Two Arrows. \$2.75.


Daily news items bring frequent reminders of the problems of American Indians in leading the normal life of an average citizen. They belong to two cultures. The ancient traditions of their forefathers are still important to them, yet the modern world is constantly influencing their ways of life with new ideas and points of view. A story such as this concerning Chaki, a Navajo boy, with his divided loyalties is excellent to bring to our children an understanding of the background and present day situation of Indian Americans. Chaki has a colorful life helping tend sheep, gathering pinyon nuts, making silver jewelry, and even trying to catch wild horses; but he is nevertheless fascinated by life outside his reservation. Good reading as a story, and good "human relations" material for children.

GRAY SQUIRREL

By Mary Adrian, Holiday House, New York, 1955. 8¼ x 6 in., 46 pp. Illustrated by Walter Ferguson. \$2.00.

This excellent life-cycle story gives a vivid picture of the yearly events of a gray squirrel's life, and involves one of the spectacular migrations of an entire squirrel population such as occasionally takes place. Although the gray squirrel is the most familiar of our native mammals, few people know its way of life in the treetops and with the dangers and problems it encounters when living in forested regions rather than in city parks. Good readers beginning third grade can read the text unaided, and all ages will be strongly attracted by the beautiful illustrations in three colors. As with other "life-cycle" books, this one acquaints children with the fact that death as well as life is to be expected as part of nature's pattern and that, among the animals, survival of the fittest is nature's law.

Free! VALUABLE U.S.A.!



Scarce genuine postage stamp as illustrated, picturing first U.S.A. (issued in 1847!); **PLUS** big collection of 30 all-different United States 19th century, valuable \$5 stamp, etc. **PLUS** packet beautiful Commemoratives including '93 Columbian, Boy Scouts, Wild West, and many others. **EXTRA!** Big illustrated U. S. catalog; 64-page Collectors' Guide — and other attractive offers for your consideration. Send 10c for mailing costs.

H. E. HARRIS & CO.
1982 Transit Bldg., Boston 17, Mass.



Insect Friends

By **EDWIN WAY TEALE**, author of *North with the Spring*. A fascinating book about the many insects friendly to man. Food producers like the honeybee, "musicians" like the snowy tree cricket, crop protectors such as the ladybird beetle and the praying mantis, and many others. The many photographs, taken by Mr. Teale in his garden, are a special feature of a book that both young people and adults will enjoy. \$3.00

The Hurricane Hunters

By **IVAN RAY TANNEHILL**, author of *Hurricanes: Their Nature and History*. The thrilling story of the daring flyers who hunt, spot, watch and send warnings about such recent visitors as Connie, Diane and Ione. Written by a world authority, it is packed with adventure and amazing facts—a timely and unusual book for all ages. Many photographs. \$3.00

Man's Emerging Mind

By **N. J. BERRILL**, author of *Journey into Wonder*. With the pace and readability of a novel, an eminent scientist traces the amazing progress of man's mind through time—from its primeval beginnings to the present—with an exciting preview of the future. Sound science, lively wit and exhilarating imagination make an ever-changing picture of man and nature through the ages. \$4.00



WONDERS INSIDE YOU

By **MARGARET COSGROVE**. The elements of anatomy and our bodily functions clearly and readably presented as a lively story, stressing the advantages of healthy living. *Drawings by the author.* Ages 8-10 \$2.50

LAST OF THE CURLEWS

By **FRED BODSWORTH**. "A dramatic and enchanting story of a lone curlew . . . the moving and thrilling story of the magic of flight. A gem of a book."—*Boston Herald*. Superb drawings on every page by T. M. Shortt. \$3.00

WONDERS OF THE WILD

Text and drawings by **JACQUELYN BERRILL**. These "Animal Portraits and Private Lives" describe some of the largest, strangest and most spectacular animals on earth in lively text and striking drawings. Ages 8 up. \$2.50

CRUICKSHANK'S POCKET GUIDE TO THE BIRDS:

Eastern and Central North America
By **ALLAN D. CRUICKSHANK**. "All the basic information."—*Audubon Magazine*. 72 natural color photographs, 78 drawings. \$2.95

At all bookstores

DODD, MEAD & COMPANY • 432 Fourth Ave., N. Y. 16

When writing advertisers, please mention Audubon Magazine

TWO practical, important
books for pet lovers

First Aid FOR PETS

BY DR. LEON WHITNEY. This simple, practical guide tells the pet owner everything he needs to know about emergency treatment of injuries and ailments of dogs, cats, birds and fish. It also includes much sound advice on correct diets and disease prevention. In handy pocket size, with index for ready reference, the book gives thorough instructions by one of the country's most experienced veterinarians. \$2.95

For young readers—

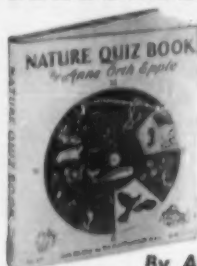
Enjoying Pets

BY J. BENTLEY AISTROP. The enjoyment, care and rearing of every kind of pet, from dogs to silkworms, are covered in this absorbing book written by a well-known pet-enthusiast. Young people will discover all the pleasure and profits found in observing and taking care of animals—satisfaction that grows out of being depended upon and loved. Photographs. \$3.00

At all bookstores

THE VANGUARD PRESS

424 Madison Avenue, New York 17



Just Published

Nature Quiz Book

By ANNE ORTH EPPLÉ

Here's a new question-and-answer book on the wonders of Nature. With 650 questions and answers in clear, readable type on all aspects of natural science, the book provides an excellent source of knowledge and entertainment for youngsters 9 to 14. 128 pages, 7x9, \$1.25.

Animal Story Book

Edited by Watty
Piper; illustrated
by Wesley Dennis



A big handsome book with beautiful illustrations in full color on every page. Children from ages 9-12 will be delighted by the fascinating stories and the colorful pictures. Pages, 10 1/2 x 12 1/2, \$2.50.

At all bookstores, or send order direct to

THE PLATT AND MUNK CO., Inc.
200 Fifth Avenue, New York 10

Your CHILDREN

By Shirley Miller



Mrs. Reginald Kepler explains correct measurements of a bluebird house to school children of Durham, North Carolina. Photograph by Charles H. Cooper.

North Carolina Bluebird Project

This month we introduce two ladies. Each has a vision and each is molding her vision into a practical project with nation-wide appeal.

First, meet Mrs. Reginald Kepler, State Chairman of Bird Conservation of the Garden Club of North Carolina. Since she was a small girl, the bluebirds in her garden have brought Mrs. Kepler great joy. She has watched their decline in population with growing concern. As she writes us, "The bluebird, loveliest and friendliest of birds, is becoming a diminishing species. Why? Because it doesn't have enough proper nesting sites. They need houses. They won't nest on the limb of a tree and must find a tree hollow, an old woodpecker hole, or a rotted hollow limb. We take good care of our orchards and when a limb dies, off it goes so that good nesting places are harder and harder to find. Put up more houses and we will have more bluebirds."

When she was appointed State Bird Chairman, she began a campaign in her state to save this bird. First she chose a slogan, "Save the Bluebird." Next, she prepared two printed sheets for distribution to all constituent clubs of the Garden Club of North Carolina. One is called SAVE THE BLUEBIRD IS YOUR STATE PROJECT, and outlines the procedure for each club to follow in carrying on this campaign, including suggestions for enlisting the

help and interest of the whole community. The other is a list of DO'S AND DON'T'S for building and erecting the houses. Local clubs are encouraged to reproduce this guide in large quantities for distribution in their communities. We have free copies of both these sheets available to anyone wishing to carry on a similar campaign. Just write to "Your Children" at 1150 Fifth Avenue, New York 28, N. Y. The campaign is meeting with outstanding success in North Carolina and it could be as successful anywhere within the bluebirds' almost nation-wide range.

The Order of Pan

Next, meet Mrs. Edna May of Washington, D. C., and also Dorothy Coble Dreese of the nation's capital who will tell you in her own words about Mrs. May's project. Mrs. Dreese writes,

"Would you like to belong to the Order of Pan? In Washington, D. C., any Audubon Junior Club member who can induce a wild, adult, uninjured bird to eat from the bare hand and who is sponsored by two adult leaders, is eligible to the Order and is elected to wear a pin.

"The Order of Pan is not new to the National Audubon Society and people the world over since the mythical Greek God cherished the thought of intimacy with birds and creatures of the wild. In 1927 Ernest Harold Baynes introduced the Order of Pan in the first issue of

When writing advertisers, please mention Audubon Magazine

AUDUBON MAGAZINE



Titmouse pin, symbol of the Order of Pan.

Nature Magazine but Mrs. Edna May of Washington is the first person to give recognition for this unusual achievement.

"Mrs. May, well-known and loved by hundreds of Audubon Junior Club members and Girl Scouts, has through selfless and untiring effort, instilled in these young people, the love of nature and the inspiration of seeking the friendship of birds. As an award for encouraging a bird to eat from the hand, she presents each with a hand-carved pin.

"Mr. Hatsutarso Fukai, a Japanese-American artist from California, designed the pin, using the tufted titmouse as the symbolic bird. In a special ceremony at a meeting of the Audubon Junior Club Council, Mrs. May gives each qualified member the coveted pin. At the first of these ceremonies in March 1955, five children received the pin. As these pins cost \$1 each it would not be possible to give the pins to outside groups but probably other clubs could follow a similar plan or purchase the titmouse pin."

Careers in Wildlife Conservation

During a recent four-day conference of Audubon Screen Tour lecturers at the



YES, 100 TOY SOLDIERS FOR \$1

We'll ship you 100 Toy Soldiers for only \$1. Colorful assortment includes 4 Riflemen, 8 Machine-gunners, 8 Sharpshooters, 4 Infantrymen, 8 Officers, 8 Cannon, 4 Bazookamen, 4 Marksmen, 4 Tanks, 4 Trucks, 4 Jeeps, 4 Battleships, 4 Cruisers, 4 Sailors, 8 WAVEs, 8 WACs, 4 Bombers and 8 Jet Planes. Each toy completely assembled, designed to scale, and measures up to 4 1/2". Order several sets NOW; kiddies love them. Send \$1.00 plus 25c for postage and handling for each set of 100 toys to:

THE ADAMS COMPANY
Heafford Junction, Wis.

Audubon Center in Greenwich, Connecticut, a subject came up for discussion several times in which we believe many parents, too, are interested. Many of the screen tour lecturers say that they have been asked by parents: "What colleges and universities give courses in the natural sciences where my child can prepare for a career in wildlife conservation?" We are pleased to recommend an excellent book on this subject called, "Professional Opportunities in the Wildlife Field," by David B. Turner. It is published jointly by the Wildlife Management Institute and the American Nature Association, and is available at \$2.50 a copy from Stackpole Company, Telegraph Press Building, Harrisburg, Pennsylvania. The book contains detailed information on employment opportunities and also lists colleges and universities and their curricula, in the U.S. and Canada, that offer training in biology, wildlife management, and wildlife conservation.

—The End

NOTICE TO MEMBERS AND SUBSCRIBERS

If you should change your address, we want you to continue to get *Audubon Magazine* uninterrupted, and without the delays usually caused by change of address notices. You can assure yourself of this if you will notify us of your new address at least 30 days in advance. Please send it to: Stencil Department, c/o National Audubon Society, 1130 Fifth Avenue, New York 28, N. Y.—The Editor



PINE CONE BIRDS

From Denmark come these captivating, plump little birdies about 2" long. They're equipped with wires to use in attaching them to branches and stalks in amusing poses.

Set of 6 to a box\$1.95 ppd.

Send for FREE Gift Catalog

THE PASCOS
West Hartford 7, Conn.

Every Boy and Girl
is a "Collector"!
(and Grown-ups too!)



YOUNG COLLECTOR KITS

Here are choice, carefully selected, professionally mounted specimens of rocks—minerals and sea-land shells. And here, too, are full length story and picture guide books full of exciting facts, legends and photographs, written by Eva Knox Evans, and prepared with the assistance of staff members of the American Museum of Natural History and the Smithsonian Institution.

YOUNG COLLECTOR'S ROCK KIT
The amazing story of how rocks were formed... the first tool... weapons... houses... ornaments... superstitions... fossils... mineral discoveries, oil, coal, diamonds, gold, uranium. The young collector is given every assistance... how and where to start collecting... equipment needed... housing... labeling... trading... rare finds... jewelry making... location and picture guide of rocks and minerals... testing methods.

Included in the rock and mineral collection are such colorful and varied specimens as uranium ore, marble, magnetite, petrified wood, granite, quartz, mica, serpentine, gold ore, garnet and many, many others, including semi-precious stones.

Boxed complete...\$2.95

YOUNG COLLECTOR'S SHELL KIT
A deft dramatization of the differences in habits of the shell animals... the part shells have played throughout history... money, ornament, magic, industry, and power. The young collector is given every assistance... how and where to start collecting... equipment needed... housing... cleaning... labeling... trading... rare finds... jewelry making... over 100 photographs for easy identification.

The shell collection includes such magnificent specimens as the pure white natica, keyhole limpet, banded tulip, olive shell, bleeding tooth, sunrise tellin, turkey wing, king's crown, strawberry strombus, and many, many others, including the enchanting sea horse.

Boxed complete...\$2.95

YOUNG COLLECTOR KITS are truly "happy hobby starters" that will enrich every youngster's experience and broaden his circle of good companionship. They are impressively boxed and make wonderful always-to-be-remembered gifts.



At leading bookstores or direct from publisher

CAPITOL
PUBLISHING CO., INC.
IRVINGTON, NEW YORK

Beauty and distinction in a
Limited Edition by Syracuse China

ATHOS MENABONI'S
**American
Song Birds**
DINNER PLATES

A gift of lifetime loveliness

In *American Song Birds* Dinner Plates, two great talents are joined—those of Athos Menaboni, world's foremost living painter of birds, and Syracuse China. Sold in two separate sets:

Set One—4 plates, boxed, \$25.00—reproduces the Carolina Wren, Eastern Bluebird, Golden-Crowned Kinglet and Painted Bunting.

Set Two—4 plates, boxed, \$25.00—reproduces the Cardinal, Cedar Waxwing, Indigo Bunting and Common Goldfinch.

China you'll cherish

Against translucent bone-white china glow the rainbow colors of the living birds. A thin gold line rims each plate luxuriously. Plates are graceful coupe shape with a diameter of 10½-in. Delicacy of feel is combined with a rare hardness of glaze, strength and durability in these plates by Syracuse China.

A limited edition

This *American Song Birds* series was created solely for the benefit of the Cerebral Palsy School-Clinic for Children in Atlanta, Ga. When the present supply is gone, no more will be produced.

Order now—for home enjoyment, for glorious gifts

Use the convenient order form below. Or mail the coupon for free full-color booklet showing and describing the plates in detail. Sara Menaboni, the artist's wife, comments authoritatively on the birds illustrated.



MAIL TODAY!

The Cerebral Palsy School-Clinic
of Atlanta, Inc.
P.O. Box 4899, Atlanta 2, Georgia

Please send me, postage prepaid:

() American Song Birds Plates, # 1 (\$25.00).

() American Song Birds Plates, # 2 (\$25.00).

() Free full-color descriptive booklet.

I enclose my check for \$_____

Name _____

Street _____

City _____ Zone _____

State _____

HOW TO ATTRACT BIRDS—Continued from Page 273

or raisins, and crumbled dog biscuits to the chick feed, and also, when available, bits of stale bread or doughnuts, leftover pancakes or boiled potatoes, and similar scraps. Most of the birds that visit the other stations, except the quail and a few casuals, also come to this one, and in addition, California scrub jays, plain titmice, Audubon's warblers, hermit thrushes, a Bewick's wren, and a house wren feed here. In fall and winter the wrens come frequently for the crumbs of the dog biscuit. Sometimes a house wren will hammer at a large crumb like a jay or thrasher in order to break it into smaller bits.

The titmice come for the sunflower seeds. I started offering these to birds in July 1955, when for 10 days a male cardinal boarded with me. After he left, a scrawny young titmouse wandered up from the oak grove in the valley below and found the sunflower seeds to his liking. When he had eaten what he wanted, he hid the rest in crevices about

the tree. If the jays got there first, they took the sunflower seeds, and everything else big enough to carry away, and hid these all over the countryside. Some of the hidden food was found and eaten by other birds, I feel sure, for I saw the titmouse find a sunflower seed that a jay had hidden.

In September, after this titmouse had become better feathered and more mature-looking, he began to sing. In just a short time he had acquired a mate and brought her with him to the feeding station for sunflower seeds. Now, for the first time, I noticed that he showed an interest in two bird boxes in the garden, going to each in turn, looking in, and making little twittering sounds as if inviting the female to come see what a nice place he had found. He was unconcerned about my near presence, but his mate, being a newcomer, was much disturbed. Later, she, too, became accustomed to me.

—To be continued in the next issue

BIRDS AND TERMITES—Continued from Page 261

wrote, "corroborates field observations that the English sparrow is an energetic destroyer of these insects when opportunity presents itself."

Of course, the native birds that the English sparrow often displaces are also great termite destroyers. Termites seem, indeed, to be wonderful delicacies to any form of insect eater; they are sought not only by birds, but by some other insects, by lizards, and even by some primitive races of men. To what lengths a bird will go to get them a robin once demonstrated. A friend of mine undertook to burn away an old stump on his grounds, and as it burned a colony of termites began leaving it. While the stump still smoldered the robin flew on it and feasted on the insects. Here was a case of "out of the fire into the frying pan"!

And for those termites that escape terrestrial dangers and get launched upon their flights it is often "out of the frying pan into the fire," for on the wing they are eagerly devoured by the aerial feeders among the birds. During an investigation he was making into the economic value of birds, Dr. S. D. Judd noted that a swarm of *Reticulitermes flavipes*—it is the most widespread eastern species—had got into the air and "fully 200 swallows, mainly bank swallows, with a few barn swallows and tree swallows, were very busy among them." Seven of the swal-

lows were shot, and were found to have eaten, altogether, 320 of the termites. What slaughter there must have been by the entire flock of swallows!

Nighthawks, swifts, and several kinds of flycatchers are other aerial-feeding birds known to destroy termites, and the full roster of the avian eaters of termites runs to at least 40 species. The creatures that feed on all termites are so numerous and sharp-eyed that the entomologist Leland O. Howard has written of *Reticulitermes flavipes* that its dispersal flight "always, except when it occurs in houses, attracts birds and other insect-eating creatures so that most of the individuals are destroyed."

It is because the chances of survival for any particular member of a swarm are therefore so low—and under conditions of human civilization thankfully low—that I say there are times when it must be discouraging to be a termite. Only because a single pair suffices to start a colony that in time may grow to number hundreds of thousands has this insect been able to perpetuate itself through the ages. Looking at the same phenomenon in another way, this is one of the many examples of nature's prodigality with life—producing myriads of individuals that are foredoomed to quick death, in order that a few may escape to maintain their race.

—The End

Whereas European immigrants come by boat, it has occurred to me that the prairie flowers might reach our seaboard by way of the airfields. The other day, Leonard Bradley, staff botanist at the Greenwich Audubon Center, showed me a prairie blazing star—*Liatris ligulistylis* that had been found on a Connecticut airport. And I am sure that the great masses of yellow flowers I saw from the airport bus at Idlewild Airport near New York City were *Grindelia*, the same gumweed, tarweed, or gumplant, that I had seen earlier that day when I boarded the plane in Minnesota.

Speaking of prairies, we have very few remnants of the original prairie left. The native flora is disappearing because the native grasses have been replaced by exotics more resistant to erosion under grazing conditions. Perhaps the best place to find prairie flowers today is the railroad right-of-way, where fences exclude cattle. Roadsides are relatively poor for them now because of mowing and plant-spraying operations. Our coastal marshes, ditched and drained, have lost most of their flowers, too. The best remaining natural flower gardens I have seen along the coast are in Delaware south of Rehoboth.

What of the future of rare native wildflowers? I gained the impression that some are in a very precarious position. Bogs along the southern margins of glaciated country are becoming fewer and bog orchids are harder to find. When a forest has been cut its shade-loving orchids may disappear. Half a century or more may pass before succession makes the forest suitable again for the orchids. How can they return? Birds have wings, as I said before; they can return to their niche. True, some seeds have parachutes or are carried by birds, but what about the others? Can seeds remain viable in the soil for a half a century? * There are many things we do not know about the survival ability of plants.

* It is not uncommon for certain weed seeds to retain their viability for 10, 20, and even 40 years after they have been buried in the soil.—The Editor

Christmas Count Dates

December 24-January 2

(deadline for copy—January 15)

Discover A WILDLIFE WONDERLAND ON THE Audubon Wildlife Tours November 28, 1955 Through April 29, 1956

Write for illustrated folder

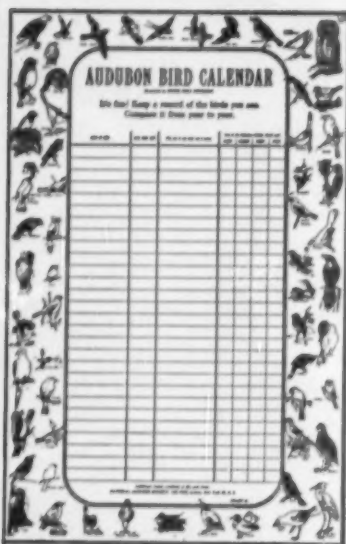


By Boat and Station Wagon



NATIONAL AUDUBON SOCIETY
13 McAllister Arcade
Miami, Florida

HOLIDAY FUN FOR CHILDREN



The 68 bird drawings by Roger T. Peterson on this chart may be attractively colored with colored pencils or crayon. Children can get their charts ready now for recording 25 species next spring when the birds begin to arrive.

25 cents each
(Special Offer: \$ for \$1.00)
plus 10c postage and handling

Audubon Nature Charts
1130 FIFTH AVENUE NEW YORK 28, N. Y.

Nature Guides for Beginners

Cruickshank's Pocket Guide to the Birds (Eastern and Central North America) 72 color photographs, 72 black-and-white drawings by Allan D. Cruickshank—\$2.95.

Mark Trail's Book of North American Mammals (250 black-and-white drawings) by Ed Dodd—\$1.95.

Birds (112 American birds in color) by Herbert Zim and Ira Gabrielson, bound \$1.50—paper \$1.00.

Flowers (134 American wildflowers in color) by Herbert Zim and Alexander C. Martin, bound \$1.50—paper \$1.00.

Insects (225 species of American insects in color) by Herbert Zim and Clarence Cottam, bound \$1.50—paper \$1.00.

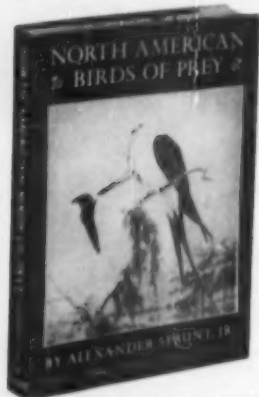
Mammals (218 animals in color) by Herbert Zim and Donald Hoffmeister, bound \$1.95—paper \$1.00.

Seashores (475 marine subjects in color) by Herbert Zim and Lester Ingle, bound \$1.95—paper \$1.00.

The American Southwest (400 subjects in color) by Nat Dodge and Herbert Zim, bound \$1.95—paper \$1.00.

Please add 10c per copy for postage and handling.

Service Department
NATIONAL AUDUBON SOCIETY
1130 Fifth Avenue, New York 28, N. Y.



An important new bird book with 40 plates in full color by Allan Brooks and identification silhouettes by Roger Tory Peterson

North American Birds of Prey

By ALEXANDER SPRUNT, JR.

Foreword by ROGER TORY PETERSON

Sponsored by the National Audubon Society

Size 6 1/2" x 9 1/4" Price \$5.00

NORTH AMERICAN BIRDS OF PREY is the only up-to-date book on this subject. It grows out of the noted volume by John Richard May, THE HAWKS OF NORTH AMERICA, which was published twenty years ago. In expanding the earlier work, Mr. Sprunt has covered the American owls, in addition to the kites, vultures, and accipiters, the buteonine hawks, the eagles, ospreys, and caracaras, and the falcons. The book grows out of the urgent need for public knowledge and understanding of our hawks, eagles, and owls whose

numbers have been steadily dwindling across the country. It makes clear that these birds in fact serve as a valuable friend of man by controlling rodents and other animals, and helping to maintain a healthy balance in the wildlife community.

The beauty, grace, and prowess of the Birds of Prey are presented here in words and pictures. The descriptive history is preceded by a detailed summary of the bird's local names, its recognition, nesting habits, and range.

ORDER FORM

National Audubon Society
1130 Fifth Avenue, New York 28, N. Y.

Gentlemen: Please send me _____ copies of NORTH AMERICAN BIRDS OF PREY by Alexander Sprunt, Jr. (Price \$5.00.) I enclose:

☐ Check

☐ Money Order

Name.....

Address.....

City..... Zone..... State.....

BITTER SANCTUARY—

Continued from Page 251

der, warmed by the radiation of the tepid waters, chilled by the great space between them and the distant sky.

The sandhill cranes of the Bitter Lakes—they are majestic evidence of God, and of time, and of the determination of some of our people that these wild gray spirits shall stay alive in our land.

—The End

Mr. Etter's Lecture Schedule

For the benefit of those readers who might like to see Mr. Etter's film, "A Missouri Story," and hear his lecture, we have included his itinerary for 1955-1956. If you would like information about tickets and the place where his lecture will be held in the city or town nearest you, write to the sponsoring agency also given below.—The Editors

Date	Sponsor
Dec. 1	Calumet Natural Science League Gary, Indiana
Dec. 2	Oberlin College Natural History Club Oberlin, Ohio
Dec. 3	Midland Nature Club Midland, Michigan
Dec. 5	Adult Education Council Freeport, Illinois
Dec. 6	Beloit College Beloit, Wisconsin
Dec. 8	Waterloo Audubon Society Waterloo, Iowa
Dec. 9	Jager Audubon Society Owatonna, Minnesota
Dec. 10	Kiwanis Club Worthington, Minnesota
Feb. 10	Buffalo Audubon Society Buffalo, New York
Feb. 11	Rockland Audubon Society Nyack, New York
Feb. 14	Audubon Society of District of Columbia Washington, D. C.
Feb. 15	Summit Nature Club Summit, New Jersey
Feb. 16	Trenton Naturalist Club Trenton, New Jersey
Feb. 17	Hackensack Audubon Society Hackensack, New Jersey
Feb. 18	Little Rest Bird Club Kingston, Rhode Island
Feb. 20	Portland Society of Natural History Portland, Maine
Feb. 22	Museum of Science Halifax, Nova Scotia



Allan D. Cruickshank

top-flight nature photographer, as well as an Audubon Screen Tour lecturer and Bird Instructor at the Audubon Camp of Maine, needs no introduction to the readers of this magazine. His prize-winning photographs have been appearing consistently in its pages, as well as in the outstanding pictorial publications of the world. Mr. Cruickshank was a member of an AUDUBON JUNIOR CLUB when a boy and he tells us that "one of the driving stimuli in my interest in natural history was my happy participation in the activities of an AUDUBON JUNIOR CLUB on the outskirts of New York City. It was at this time that I snapped my first nature pictures with a small Brownie camera."

EACH CLUB LEADER RECEIVES



NATURE PROGRAM GUIDE ANNUAL: The NEW leader's manual, packed full of projects and activities for a club program for the whole year. It is divided into a section on Indoor and Outdoor projects, emphasizing birds; a section on Trees and Forests with lively new games and experiments and a section on Sky and Weather with more projects.

NOTEBOOK SUPPLEMENT: This provides each leader of a club with specific suggestions for correlating the material in the Audubon Junior Club Notebook, which each child in the group receives, with his own teaching and leadership program. By following the instructions in this Supplement you will be delighted with the children's increased interest in all school subjects.



AUDUBON JUNIOR NEWS: The nature magazine for boys and girls, written and illustrated in part by club members themselves. Contains timely projects and activities for both groups and individual children.

EVERY CHILD IN THE CLUB RECEIVES

AUDUBON JUNIOR CLUB NOTEBOOK: This NEW book for each child in the club contains three exploration stories (one called "Let's Explore our Backyard,") with colored pictures of birds, mammals and flowers and full page outline drawings for hand coloring of each story. Also contains space for each child to write up his own exploration stories; space for him to keep a Nature Calendar for a year and other how-to-do individual nature projects.



AUDUBON JUNIOR CLUB BUTTON: Each boy and girl in a club proudly wears this colorful pin certifying that he is a Junior Member of the National Audubon Society.

Any group of ten or more children, plus an adult leader, may form an AUDUBON JUNIOR CLUB. Each child in the group pays 25c dues for his full year's membership. The Club Leader sends the dues to AUDUBON JUNIOR CLUBS, 1130 Fifth Avenue, New York 28, N. Y., and the order is filled at once and sent to the Leader by parcel post.

AUDUBON JUNIOR CLUBS

1130 FIFTH AVENUE, NEW YORK 28, N. Y.

Audubon Market Place

CLASSIFIED ADVERTISING

Rates for classified advertising: 15¢ a word; minimum order \$3.00

Binoculars—Telescopes—Microscopes

THE CHRISTMAS GIFT SUPREME—Binoculars we have specially adapted for birding! Send for details and price list of Bausch & Lomb and Japanese binoculars with quality analysis. Also Bausch & Lomb and Japanese scopes with interchangeable eyepieces of different magnifications, tripod adapters, car-window mounts, etc. Gift sales on approval until 10 days after Christmas. Liberal trade-ins. Before buying, read our double article "Know Your Binoculars" published in Audubon Magazine (1951). Wholly unbiased, it tells you how to choose the "right" model, how to check it for the claims made for it, and how to use it to best advantage. Fully illustrated 12-page reprint 10¢—no charge to Audubon Society or bird club members. We also answer questions personally. Open Saturdays 10-1. (Mount Vernon 4-2772). The Reicherts, Mirakel Repair Co., 14 West First St., Mt. Vernon 2, New York.

BEFORE THE CHRISTMAS BIRD COUNT—Check your binocular for alignment. For a simple method, see our article "Alignment" published in January 1954 Audubon Magazine (reprint on request). Or send your glass to us for free collimator test and report. We repair and hard-coat all makes; alignment to U. S. Government specifications taken only 3 days. Make sure—mail your glass now. See above ad. Mirakel Repair Co., Mt. Vernon 2, New York.

CHRISTMAS GIFTS. Postpaid! New Swiss black rubber binocular straps, make any glasses seem lighter, \$1.50. Bushnell 6x30 monocular, \$19.75; 8x30, \$21.75; 7x35, \$27.25. With cases. NO tax. For telescopes: tripod mount, \$6.85. Combination car window-tripod mount, \$14.95; turret adapter, holds 3 eye-pieces, \$14.95. U.S., Swiss, German, Japanese binoculars. Bartlett Hendricks, Binocular Headquarters, Pittsfield 50-A, Mass.

AMAZING PRICES. Precision Binoculars, microscopes, telescopes. Free trial. Folder "Binocular Selecting," price lists free. Prentiss Importers, Mercury Building, West Los Angeles 25, California.

BINOCULARS, TELESCOPES, etc., repaired. Guaranteed workmanship. Lenses coated for brighter vision. Damaged lenses or prisms replaced. Bifocal eye cups made to order for eye glass wearers. Lost or broken eye cups replaced. Describe repairs or send instrument for free estimate. Write for descriptive folder. Liberal trade-ins on new Bushnell binoculars. Gould Lens Service, 26-D Franklin Avenue, Binghamton, N. Y.

BINOCULARS, BAROMETERS, TELESCOPES—Terrestrial and Celestial. Largest stock in town. Zeiss, Leitz, Hensoldt, B&L, Sord, Bushnell, German, French and Japanese—New and Used. Sell, buy and trade. 30 day free trial. Clean and repair all makes. Over twenty-five years of reliable optical service. Belg. Opticians, 2 East 44th Street, New York 17, N. Y. Come in or Just Write.

BINOCULARS. Prompt service and repairs on binoculars, field glasses and opera glasses. Free estimates on all repairs. Also authorized dealers and service for Bausch & Lomb and Hertz (German) binoculars. Large selection of binocular cases. Established 1921. Charles W. Mayher & Son, 5 South Wabash Avenue, Chicago 3, Illinois. Phone Dearborn 2-7957.

BINOCULARS—REPAIR—RECONDITION—Authorized dealers Bausch & Lomb, Zeiss, French and other imported brands. Deli & Deli Opticians, 19 West 44th Street, New York 36, N. Y. VA 6-2785

TELESCOPES for terrestrial and celestial use. Also lens systems with plans if you would like to build your own. Revere Instrument Company, 5556 Hollywood Boulevard, Hollywood 28, California.

MUST SELL my Zeiss "Binocetm" 7x50 binoculars. Almost new, in perfect condition. Central focusing, light weight, coated; carrying case and straps. \$150 postpaid. No taxes. Laddaw Williams, Route 1, Box 152, Carmel, California.

"THE GALILEO," 30x40 mm., coated, high precision, lightweight, Astronomers' and Birders' portable spotting refractor telescope. A \$45.00 value; specially priced, \$19.95 postpaid. Satisfaction guaranteed. Send check or money order or request free brochure. Gustav-Martin, Inc., Box 1161, Chicago 99, Illinois.

Books

BOOKS on Birds, Mammals, Natural History subjects. New or out-of-print. Catalogs furnished. Pierce Book Company, Winthrop, Iowa.

BOOKS on Fish, Fishing, Birds, Animals, Nature. Request free catalog listing hundreds of new, used and rare books. Sporting Book Service, Rancocas, N. J.

NORTH AMERICAN TREES by Preston. The most complete pocket-size manual of North American trees available. Full, accurate descriptions of 558 species; 428 pages, 160 full-page illustrations. \$3.50 postpaid from Tree Books, Press Building, Ames, Iowa.

WALCOTT'S MONUMENTAL AND BEAUTIFUL WORK ON NORTH AMERICAN WILD FLOWERS. With 400 finely colored plates. 5 volumes. 1925-29. (Published \$150.00) . . . \$100.00. The most sumptuous publication of the kind ever attempted in America. This is the Audubon of the Floral World. **AUDUBON'S BIRDS OF AMERICA.** Bent's **LIFE HISTORIES** and many other important works on ornithology, botany, etc. Books purchased. Nada Ersmar, Natural History Bookseller, 927-15th St., N.W., Washington 5, D. C.

BOOKS. All the new books of all publishers on any subject. No mailing charges. Also frequent lists offering fine old books, periodicals, reprints. Fair prices paid for libraries or your duplicates. John O. Burch, 1586 W. Vernon, Los Angeles 62, California.

BOOKS—NATURAL HISTORY our specialty. Free catalogues. Libraries purchased. Your wants solicited. John Johnson, Homespun Acres, R.F.D. 2, North Bennington, Vermont.

WHERE TO FIND BIRDS IN MINNESOTA. edited by Kenneth D. Morrison, W. J. Breckenridge, and Josephine Daneman Herz. The indispensable guide to birding in 78 areas in Minnesota. Revised and enlarged. 1955. Sponsored by National Audubon Society. \$2.00 postpaid. Webb Publishing Company, St. Paul 3, Minnesota.

Films—Slides

BIRD LIFE in glorious color. 2x2 color slides from close-up photographs of **LIVE WILD** birds. Twelve slides \$5.00. Twenty-five \$10.00. Sample and list 50¢. J. M. Stemen, Goshen, Indiana.

NATURE SLIDES. Western birds, flowers, animals, clouds, etc. Sample slide with credit slip 25¢. Mention interests and receive lists. Collect beautiful identified birds, animals, flowers of the world on postage stamps. Samples, lists and credit slip for 25¢. Scott Lewis, 1338 Buena Vista, Palm Springs, California.

COLOR SLIDES tell the story of wildflowers, birds, and insects. Choose from over 500, copied from original 2x2 Kodachromes. Catalogs and prices on request. Indicate subject. Lee Jenkins, P.O. Box 336, Columbia, Missouri.

Birdhouses—Feeders

BEAUTIFUL BIRDHOUSE \$1.25. Feeders \$1.50. Parakeet nesting boxes \$1.25. Knockdown postpaid. Yonghaus, 666-44A, Mountain View, New Jersey.

WREN-HOUSE—white birch-log section—removable roof, \$3.00. Seed feeding station with hinged roof for easy filling—glass front—large capacity—\$2.50. **BOTH FOR ONLY \$3.95** postpaid. Taylor Trading Company, White Lake, Wisconsin.

WILDLIFE
shady
Wake

ENCHASING
to draw
efficient

CAPERS
excellence
ther to
Pine

VACATION
paint
or sell
slides
Northbrook, Illinois.

COLORFUL PORTRAITS. PERSONALIZED Mementos—From favorite (field trip, indoor) "Poses." Unconditional, money-back guarantee! Send photograph, \$1.00 (Refundable): Auditorstudio, Ojai, California.

SALE—ALL UNUSED. Forbush '25, '27, '29. Early Birds, except 107, 126. Dawson's California, best patron's ed. Howell, Florida. Taverner, West; East. Pacific Avifauna. Clifford Marburger, Denver, Pennsylvania.

60 YEARS OF THE AUK ('95-'54 incl.) plus 4 ten-year indexes, all perf. condition, orig. wraps, \$160; 45 years of Bird Lore and Aud. Mag. ('08-'47 incl.), \$48; 10 consecutive vols. Bent's Life Histories, Birds of Prey through Wood Warblers, perf., orig. wraps, \$40. All express collect. Gilbert Cant, 716 Guion Drive, Mamaroneck, N. Y.

NICE COLLECTION eight labeled Florida sea shells 50¢. Price list on request. Walter Plained, 95 Newcomb Road, Tenafly, New Jersey.

100 TOY SOLDIERS \$1.00 plus 25¢ for handling and mailing. Colorful plastic. Kiddies love them. Order several sets NOW to fill your juvenile gift list. Adams Company, Heaford Junction, Wisconsin.

FOR SALE. Near Ridgefield, Conn. Beautiful 10 acre-woodland. Small private lake, 3 streams, waterfall. Write H. Paul, Ridgefield. Phone ID 8-2567.

NATURE SURVEY OF YOUR PROPERTY. Know your own birds, plants, wildlife. Written report and census of species, \$100 plus 7¢ mile travel; highly varied terrain or extensive proportion more. Caribon Press, Bronxville, N. Y.

When writing advertisers, please mention Audubon Magazine

AUDUBON MAGAZINE

AUDUBON CHRISTMAS CARDS



INDEX

HAS BEEN REMOVED
TION AND PLACED AT
OF THE FILM FOR
E OF READERS.

From 1953 and 1954 the charming ruby-crowned kinglet and colorful flamingo cards are available, while they last, at 10¢ each. Cards measure 5" x 7", envelopes included.

Please add 10¢ for postage for all orders of Christmas Cards.



SERVICE DEPARTMENT
National Audubon Society
1130 5th Ave., N. Y. 28, N. Y.

Bird Feeders

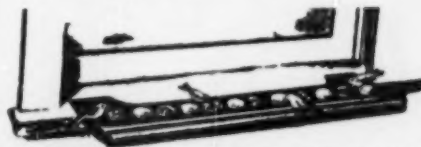
The Ideal Christmas Gift



ORNAMENTAL FEEDING
STATION \$25.00
Shipping Charges Collect



WEATHERVANE FEEDER \$22.00
Shipping Charges Collect



FESTIVE BOARD W 1. \$1.95 — REFILLS \$1.25



GARDEN
SNACKERY
\$8.45
*Shipping
Charges Collect*



RUSTIC FEEDER \$5.30



WINDOW FEEDER \$7.70



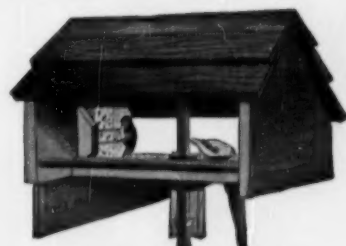
SUCTION FEEDER \$6.00



WINDOW FEEDER \$7.50



CHICKADEE
DINER \$1.45



SALT BOX INN \$9.45
Shipping Charges Collect

On all items not marked "shipped collect" add 10% east of the Mississippi and 15% west of the Mississippi to cover mailing costs.

Prices Subject to Change

Order From
SERVICE DEPARTMENT
National Audubon Society
1130 Fifth Ave., New York 28, N. Y.



BIRD'S FILLING STATION
\$4.95 (NOT FILLED)

When writing advertisers, please mention Audubon Magazine

Audubon Market Place

CLASSIFIED ADVERTISING

Rates for classified advertising: 15¢ a word; minimum order \$3.00

Binoculars—Telescopes—Microscopes

THE CHRISTMAS GIFT SUPREME—Binoculars we have specially adapted for birding! Send for details and price list of Bausch & Lomb and Japanese binoculars with quality analysis. Also Bausch & Lomb and Japanese scopes with interchangeable eyepieces of different magnifications, tripod adapters, car-window mounts, etc. Gift sales on approval until 10 days after Christmas. Liberal trade-ins. Before buying, read our double article "Know Your Binoculars" published in Audubon Magazine (1961). Wholly unbiased, it tells you how to choose the "right" model, how to check it for the claims made for it, and how to use it to best advantage. Fully illustrated 12-page reprint 10¢—no charge to Audubon Society or bird club members. We also answer questions personally. Open Saturdays 10-1. (Mount Vernon 4-2772). The Reicherts, Miracle Repair Co., 14 West First St., Mt. Vernon 2, New York.

BEFORE THE CHRISTMAS BIRD COUNT—Check your binocular for alignment. For a simple method, see our article "Alignment" published in January 1954 Audubon Magazine (reprint on request). Or send your glass to us for free collimator test and report. We repair and hard-coat all makes: alignment to U. S. Government specifications takes only 3 days. Make sure—mail your glass now. See above ad. Miracle Repair Co., Mt. Vernon 2, New York.

CHRISTMAS GIFTS. Postpaid! New Swiss black rubber binocular straps, make any glasses seem lighter, \$1.50. Bushnell 6x30 monocular, \$19.75; 8x20, \$21.75; 7x35, \$27.25. With cases. NO tax. For telescopes: tripod mount, \$6.65. Combination car window-tripod mount, \$14.95; turret adapter, holds 3 eye-pieces, \$14.95. U.S., Swiss, German, Japanese binoculars. Bartlett Hendricks, Binocular Headquarters, Pittsfield 59-A, Mass.

AMAZING PRICES. Precision Binoculars, microscopes, telescopes. Free trial. Folder "Binocular Selecting," price lists free. Prentiss Importers, Mercury Building, West Los Angeles 35, California.

BINOCULARS, TELESCOPES, etc., repaired. Guaranteed workmanship. Lenses coated for brighter vision. Damaged lenses or prisms replaced. Shallow eye cups made to order for eye glass wearers. Lost or broken eye cups replaced. Describe repairs or send instrument for free estimate. Write for descriptive folder. Liberal trade-ins on new Bushnell binoculars. Gould Lens Service, 26-D Franklin Avenue, Binghamton, N. Y.

BINOCULARS, BAROMETERS, TELESCOPES—Terrestrial and Celestial. Largest stock in town. Zeiss, Leitz, Hensoldt, B&L, Sarg, Bushnell, German, French and Japanese—New and Used. Sell, buy and trade. 30 day free trial. Clean and repair all makes. Over twenty-five years of reliable optical service. Beitz, Opticians, 2 East 44th Street, New York 17, N. Y. Come in or Just Write.

BINOCULARS. Prompt service and repairs on binoculars, field glass and opera glass. Free estimates on all repairs. Also authorized dealers and service for Bausch & Lomb and Hertsel Reuss (German) binoculars. Large selection of binocular cases. Established 1921. Charles W. Mayher & Son, 5 South Wabash Avenue, Chicago 5, Illinois. Phone Dearborn 2-7957.

BINOCULARS — REPAIR — RECONDITION — Authorized dealers Bausch & Lomb, Zeiss, French and other imported brands. Dell & Dell Opticians, 19 West 44th Street, New York 36, N. Y. VA 6-3785

TELESCOPES for terrestrial and celestial use. Also lens systems with plans if you would like to build your own. Revere Instrument Company, 5886 Hollywood Boulevard, Hollywood 38, California.

MUST SELL my Zeiss "Binocetm" 7x50 binoculars. Almost new, in perfect condition. Central focusing, light weight, coated; carrying case and straps. \$150 postpaid. No taxes. Laidlaw Williams, Route 1, Box 162, Carmel, California.

"THE GALILEO," 30x40 mm., coated, high precision, lightweight, Astronomers' and Birders' portable spotting refractor telescope. A \$45.00 value; specially priced, \$19.95 postpaid. Satisfaction guaranteed. Send check or money order or request free brochure. Gustav-Martin, Inc., Box 1161, Chicago 98, Illinois.

Books

BOOKS on Birds, Mammals, Natural History subjects. New or out-of-print. Catalogs furnished. Pierce Book Company, Winthrop, Iowa.

BOOKS on Fish, Fishing, Birds, Animals, Nature. Request free catalog listing hundreds of new, used and rare books. Sporting Book Service, Hancoccs, N. J.

NORTH AMERICAN TREES by Preston. The most complete pocket-size manual of North American trees available. Full, accurate descriptions of 558 species; 428 pages, 160 full-page illustrations. \$3.50 postpaid from Tree Books, Press Building, Ames, Iowa.

WALCOTT'S MONUMENTAL AND BEAUTIFUL WORK ON NORTH AMERICAN WILD FLOWERS. With 400 finely colored plates, 3 volumes. 1925-29. (Published \$150.00) . . . \$100.00. The most sumptuous publication of the kind ever attempted in America. This is the Audubon of the Floral World. AUDUBON'S BIRDS OF AMERICA. Bent's LIFE HISTORIES and many other important works on ornithology, botany, etc. Books purchased. Nada Kramar, Natural History Bookseller, 927-15th St., N.W., Washington 5, D. C.

BOOKS. All the new books of all publishers on any subject. No mailing charges. Also frequent lists offering fine old books, periodicals, reprints. Fair prices paid for libraries or your duplicates. John O. Burch, 1586 W. Vernon, Los Angeles 62, California.

BOOKS — NATURAL HISTORY our specialty. Free catalogs. Libraries purchased. Your wants solicited. John Johnson, Homespun Acres, R.F.D. 2, North Bennington, Vermont.

WHERE TO FIND BIRDS IN MINNESOTA. edited by Kenneth D. Morrison, W. J. Breckenridge, and Josephine Daneman Hers. The indispensable guide to birding in 78 areas in Minnesota. Revised and enlarged, 1955. Sponsored by National Audubon Society. \$2.00 postpaid. Webb Publishing Company, St. Paul 2, Minnesota.

Films—Slides

BIRD LIFE in glorious color. 2x2 color slides from close-up photographs of LIVE WILD birds. Twelve slides \$5.00. Twenty-five \$10.00. Sample and list 50¢. J. M. Stemen, Goshen, Indiana.

NATURE SLIDES. Western birds, flowers, animals, clouds, etc. Sample slide with credit slip 25¢. Mention interests and receive lists. Collect beautiful identified birds, animals, flowers of the world on postage stamps. Samples, lists and credit slip for 25¢. Scott Lewis, 1338 Buena Vista, Palm Springs, California.

COLOR SLIDES tell the story of wildflowers, birds, and insects. Choose from over 500, copied from original 2x2 Kodachromes. Catalogs and prices on request. Indicate subject. Lee Jenkins, P.O. Box 536, Columbia, Missouri.

Birdhouses—Feeders

BEAUTIFUL BIRDHOUSE \$1.25. Feeders \$1.50. Parakeet nesting boxes \$1.25. Knockdown postpaid. Yonghaus, 666-44A, Mountain View, New Jersey.

WREN-HOUSE—white birch-log section—removable roof, \$3.00. Seed feeding station with hinged roof for easy filling—glass front—large capacity—\$2.50. BOTH FOR ONLY \$3.95 postpaid. Taylor Trading Company, White Lake, Wisconsin.

Plants—Seeds

WILDFLOWERS AND FERNS to brighten a shady nook. Send now for our free catalogue. Wake Robin Farm, Box 33, Home, Pennsylvania.

Camping—Travel

ENCHANTED PLACE—424 Southwest 4 Avenue, Fort Lauderdale, Florida. Quiet surroundings. Ideal for rest and study. Walking distance to town. Large courtyard. Bedroom apartments, efficiencies, rooms. Sanders Apartments.

CAPE ROMAIN AND BULLS ISLAND BIRDS: You can spend comfortable nights, have excellent meals, and packed lunches. For further information write Mrs. Gertrude L. Miles, Pinola Plantation, McClellanville, South Carolina. Phone 3459.

Miscellaneous

VACATION TO BE REMEMBERED. Let me paint your favorite color outdoor slide for den or office. Original bird paintings also. Sample slides upon request. Rod Stemo, 2122 Oak Street, Northbrook, Illinois.

COLORFUL PORTRAITS. PERSONALIZED Mementos—From favorite (field trip, in-door) "Poses." Unconditional, money-back guarantee! Send photograph, \$1.00 (Refundable): Auditorio, Ojai, California.

SALE—ALL UNUSED. Forbush '25, '27, '29. Early Bents, except 107, 126. Dawson's California, best patron's ed. Howell, Florida. Taverner, West; East. Pacific Avifauna. Clifford Marburger, Denver, Pennsylvania.

60 YEARS OF THE AUK ('95-'54 incl.) plus 4 ten-year indexes, all perf. condition, orig. wraps, \$160; 45 years of Bird Lore and Aud. Mag. ('93-'47 incl.), \$45; 10 consecutive vols. Bent's Life Histories, Birds of Prey through Wood Warblers, perf., orig. wraps, \$40. All express collect. Gilbert Cant, 716 Guinn Drive, Mamaroneck, N. Y.

NICE COLLECTION eight labeled Florida sea shells 50¢. Price list on request. Walter Flaisted, 95 Newcomb Road, Tenafla, New Jersey.

100 TOY SOLDIERS \$1.00 plus 25¢ for handling and mailing. Colorful plastic. Kiddies love them. Order several sets NOW to fill your juvenile gift list. Adams Company, Heaford Junction, Wisconsin.

FOR SALE. Near Ridgefield, Conn. Beautiful 10 acre-woodland. Small private lake, 3 streams, waterfall. Write H. Paul, Ridgefield. Phone ID 8-2547.

NATURE SURVEY OF YOUR PROPERTY. Know your own birds, plants, wildlife. Written report and census of species, \$100 plus 7¢ mile travel; highly varied terrain or extensive properties more. Caribon Press, Bronxville, N. Y.

When writing advertisers, please mention Audubon Magazine

AUDUBON MAGAZINE

AUDUBON CHRISTMAS CARDS



We are offering for our 50th anniversary Christmas Card a reproduction of John J. Audubon's beautiful painting of the cardinal, plate 159, from the Elephant Folio edition of "The Birds of America."

20¢ each 10 for \$1.75
25 and any quantity over,
15¢ each

Cards measure 5" x 7",
Envelopes included.



From 1953 and 1954 the charming ruby-crowned kinglet and colorful flamingo cards are available, while they last, at 10¢ each. Cards measure 5" x 7", envelopes included.

Please add 10¢ for postage for all orders of Christmas Cards.



SERVICE DEPARTMENT
National Audubon Society
1130 5th Ave., N. Y. 28, N. Y.

Bird Feeders *The Ideal Christmas Gift*



ORNAMENTAL FEEDING
STATION \$25.00
Shipping Charges Collect



WEATHERVANE FEEDER \$22.00
Shipping Charges Collect



FESTIVE BOARD W 1. \$1.95 — REFILLS \$1.25



GARDEN
SNACKERY
\$8.45
*Shipping
Charges Collect*



RUSTIC FEEDER \$5.30



WINDOW FEEDER \$7.70



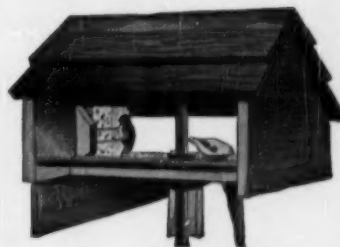
SUCTION FEEDER \$6.00



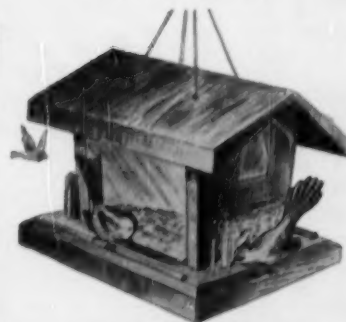
WINDOW FEEDER \$7.50



CHICKADEE
DINER \$1.45



SALT BOX INN \$9.45
Shipping Charges Collect



BIRD'S FILLING STATION
\$4.95 (NOT FILLED)

On all items not marked "shipped collect" add 10% east of the Mississippi and 15% west of the Mississippi to cover mailing costs.

Prices Subject to Change

Order From
SERVICE DEPARTMENT
National Audubon Society
1130 Fifth Ave., New York 28, N. Y.

When writing advertisers, please mention Audubon Magazine

From the Land of Audubon



The perfect Christmas gift, this lavishly illustrated yet popularly priced book will entertain and provide answers for those of all ages interested in birds.

Louisiana Birds

By GEORGE H. LOWERY, JR.

Illustrated by ROBERT E. TUCKER

xxxii, 557 pp., 29 unnumbered plates, index, bibliography, and end papers.

\$5.00

Every one of the 377 species recorded in Louisiana is portrayed in color plates, photographs, or line drawings. For identification purposes, similar species are grouped together on the same plates, permitting quick comparison. In addition, each species is discussed authoritatively yet informally in a separate account.

- Over 377 species treated, giving descriptions and field traits
- 13 full-page, four-color plates
- 27 full-page, two-color plates
- 69 photographs (bird portraits)
- 14 full-page habitat photographs
- 135 text illustrations, and
- 12 bar graphs showing the seasonal distribution of 304 species



LOUISIANA STATE UNIVERSITY PRESS
BATON ROUGE 3, LA.

Gentlemen: Please send () copies of *Louisiana Birds*

☐ Check enclosed. (Postage prepaid.)

☐ Bill me.

Name _____

Street _____

City _____ Zone _____ State _____

